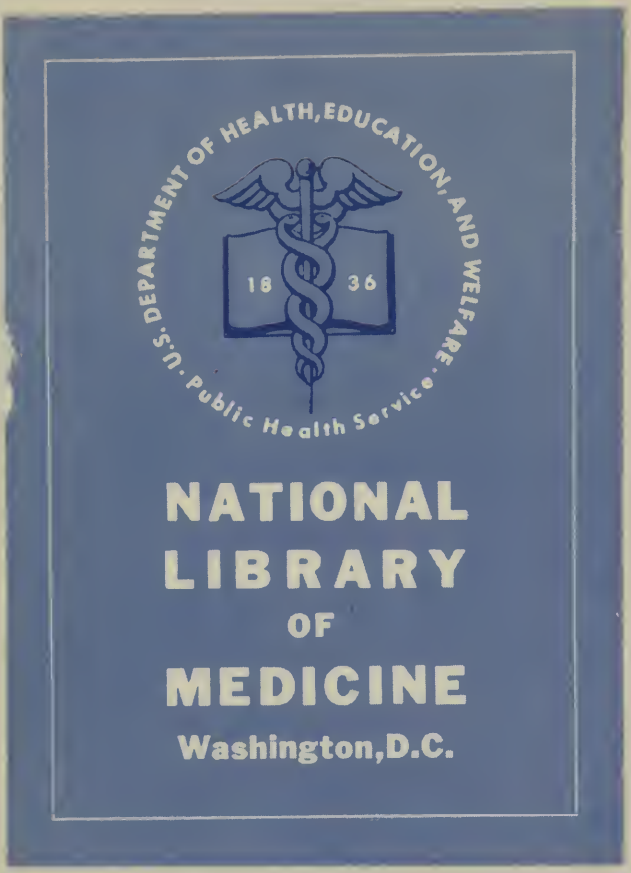
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ON THE

RESULTS OF SURGICAL OPERATIONS

IN

MALIGNANT DISEASES.

BY

S. D. GROSS, M. D.

PRESENTED TO THE AMERICAN MEDICAL ASSOCIATION,

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RESULTS

OF

SURGICAL OPERATIONS, ETC.

PART I.—GENERAL OBSERVATIONS.

§ 1. NATURE, OBJECTS, AND DIFFICULTIES OF THE INQUIRY.

Two years have elapsed since the undersigned had the honour to be appointed by this Association Chairman of a Committee on the Results of Surgical Operations in Malignant Diseases. Soon after he was officially notified of his election, he addressed a circular to his professional brethren, both in the United States and in Canada, setting forth the objects upon which he desired information, and earnestly inviting their co-operation in the fulfilment of his arduous and responsible labours. In addition to this, he wrote nearly one hundred letters to the most prominent surgeons and physicians, entreating them to communicate to him the results of their experience upon a subject of so much interest and importance to the welfare of the human family and the character and dignity of our own profession. To the appeals thus made, the Chairman of the Committee, he regrets to say, received hardly a dozen responses, and not more than half that number embraced any matter calculated to impart real value to his report. The most important contributions that have reached him are from the pens of Dr. J. Mason Warren, of Boston, and Professor Hamilton, of Buffalo. Interesting communications have also been received from Professor Paul F. Eve, of Georgia, Dr. George A. Bethune, of Massachusetts, Professor Pope, of St. Louis, Dr. Tripler, of the United States Army, Dr. Green, of Easton, Pennsylvania, Dr. Norris and Dr. Littell, of Philadelphia, Professor Mussey, of Cincinnati, Dr. Alexander Barclay, of Newburg, New York, and Professor Palmer, of the University of Louisville.

To my young friends, Dr. William H. Miller, Dr. Alexander Forsyth, and Dr. J. Rowan Pirtle, graduates of the University of Louisville, I am indebted for the tables which accompany the remarks on malignant diseases of the uterus, testis, and mammary gland. My former pupil, Dr. D. D. Thomson, of this city, has also furnished me with several interesting cases of carcinoma of the lip.

Soon after receiving my appointment, Professor Parker, of New York, and Dr. J. M. Warren, of Boston, kindly consented to serve on the Committee; but, owing to his arduous and incessant engagements, the former of these gentlemen has not, I regret to say, been able to afford me any assistance; the valuable contribution of the latter, already alluded to, will be found, without any alteration, in its appropriate place. For the rest of the report I alone am responsible.

It may be proper to observe here, that, in the prosecution of my labours, I have generally employed, as more convenient, and better suited to my purpose, the pronoun "I," instead of the more common phrase, "Chairman of the Committee."

Having failed to obtain from the profession of the United States a full and complete expression of their views upon the subjects set forth in his circular and in his private communications, the Chairman of the Committee, in order to give force and value to his labours, has deemed it his duty to seek information wherever he thought it could be found. For this purpose, he has appealed to the ancient fathers of the profession, and has brought himself as it were into close personal relation with the writers of his own times in Europe, in the hope of being able to extract some light that might serve to guide the practitioner of the present day in a class of affections that have been emphatically styled the *opprobria* of the surgeon and the physician. Like the emmet, he has endeavoured to extract whatever seemed useful, and to throw it into a heap for the benefit of the profession. In a question so momentous as the present, it is needful that the experience of ages should be brought forward, analyzed, and compared, that the wheat may be winnowed from the chaff, and the result exhibited in its true character.

Such a step must, indeed, be considered as indispensable when we remember how many of the works of these writers find their way into the United States, either in their original garb, or in the form of reissues. This remark is particularly applicable to British works, the great majority of which are reprinted in this country soon after they are published at home, and which, consequently, speedily reach the

libraries of our physicians, by many of whom they become, in due time, to be regarded as authority, perhaps, of the highest order. But this is not all. Many of these works are used as text-books in our schools, and thus, falling into the hands of our pupils at an age when their opinions are easily moulded, create an impression which neither time nor circumstances can efface.

The opinions of the continental writers of Europe, especially of the French, are hardly less authoritative with the American practitioner; for, although their works are rarely translated into our language, yet their contents are sure to be made known to us, at the earliest possible moment, by our medical press, and by those valuable and widely circulated periodicals, *Braithwaite's Retrospect*, and *Ranking's Half-yearly Abstract.*

Our own country is lamentably deficient in native works on surgery; and there is reason to believe that the few treatises which have appeared upon the subject have exerted but little, if any, agency in influencing and shaping the professional mind of the United States. *The Elements of Surgery*, by the late Dr. John Syng Dorsey, of Philadelphia, have long been out of print, to say nothing of the fact that they were composed principally of materials derived from foreign authors, as Desault, Boyer, Cooper, and the Bells; and the *Institutes of Surgery*, by Dr. Gibson, the veteran Professor of Surgery in the University of Pennsylvania, although they have passed through numerous editions, have not, it seems to me, exerted that wide and controlling sway over American practitioners that might have been reasonably expected from the high position of their author. The minds of his own pupils, or, rather, those of the school with which he has been so long connected, have been mainly the recipients of their contents. Few of our colleges have recommended the *Institutes* as a text-book to their students; a fate which has been experienced by most of our native productions, and which must continue as long as foreign works are permitted to usurp the rights of our own. American physicians and surgeons seem to glory in being the slaves of European authority in whatever pertains to their profession, both in matters of opinion and practice; like Esau, they have bartered away their birthright for a mess of pottage; they are unwilling to learn anything that is purely American; they are too proud to acknowledge that anything good can emanate from a native author; and too stubborn to admit that one man knows more than another. They would rather at any time—lest they should seem to be indebted to their own countrymen—quote

Louis and Chomel than Drake and Chapman, or Cooper and Brodie than Gibson and Mott. It is a bitter humiliation to find this tendency in our profession; a tendency so utterly at variance with the true spirit of patriotism, with our national pride, and with our national advancement as a scientific and literary people. It is mortifying to see that everything in the shape of a foreign book, however shallow and indifferent, is greedily sought and patronized to the neglect of our own productions.

It need hardly be said that the subject intrusted to the Committee is one of great perplexity. On every side, in fact, it presents difficulties which, in the existing state of the science, are absolutely insurmountable, notwithstanding the numerous attempts that have been made to remove them. The information collected in this report, if useful at all, is so rather negatively than positively. It shows what has been done rather than what has been achieved. It proves that this department of the healing art has been more "laboured than advanced." In short, it exhibits the humiliating evidence that our professional brethren, although they often wandered in quest of Truth, have hitherto failed to find her, and that the great subject, in point of fact, remains precisely where it was in the time of Hippocrates, whose wonderful sagacity induced him to declare that malignant diseases, by whatever name they may be known, or whatever organ they may attack, never forgive, but that they are always incurable by the knife and escharotics, and sooner or later destroy their victim.

Much of the perplexity here alluded to grows out of the difficulty which attends the diagnosis of malignant diseases and malignant tumours. Few men, whatever may be the amount of their science, experience, and tact, are able, at all times, or in all cases, to discriminate, with positive certainty, between these affections and those called non-malignant, benign, or innocuous; while the great majority find themselves utterly bewildered at every step of the inquiry. It is not difficult, therefore, to account for the errors which are constantly committed in practice, and to explain the reason why a tumour or disease which one surgeon regards as malignant should be considered as benign by another, and *vice versa*. The daily experience of medical men and the records of the profession abundantly verify the truth of these remarks. The mammary gland has been sacrificed a thousand times for diseases supposed at the time to be cancerous, but which, upon a more careful examination, proved to be nothing but "milk-knots," scrofulous swellings, or chronic abscesses. A tes-

ticle, affected with sarcocele, or chronic enlargement, has frequently shared a similar fate. There is not a museum or private collection anywhere in the country that does not afford multiplied proofs of the truth of this statement.

M. Broca, in an able and elaborate article on the pathological anatomy of cancer, in the sixteenth volume of the *Mémoires de l'Académie Nationale de Médecine*, states that the late Dr. Blandin, surgeon of the Hôtel-Dieu of Paris, operated, in hospital and private practice, in 1847 and 1848, upon sixty-nine persons, for tumours that were neither fibrous nor adipous, and which, before the application of the microscope to the study of morbid structure, would have been pronounced cancerous. A careful examination, however, with that instrument, enabled Broca to determine their precise character. Thus, of the sixty-nine, two were fibro-colloid; five consisted exclusively of fibro-plastic tissue; fifteen others, of which fourteen were taken from the face and one from the prepuce, were epithelial; and eight, removed from the breast, were simple hypertrophies of that organ. Of the remaining thirty-nine patients whose tumours were really cancerous, eleven died from the immediate effects of the operation; and of the rest who survived, nineteen, whose subsequent history alone could be ascertained, had a relapse of the malady. M. Lebert, in his recent treatise on cancer, bears similar testimony in regard to these errors of diagnosis at the Hôtel-Dieu of Paris. M. Cruveilhier, in a paper read before the French Academy of Medicine, in 1844, broadly asserted that surgeons are continually cutting out fibrous tumours from the female breast, which never undergo the carcinomatous transformation, and which, therefore, might be allowed to remain with perfect safety.* "Diseases of all sorts," says Professor Müller, of Berlin, "have been extirpated for scirrhus and cancer."†

Now, if Blandin and his colleagues are so frequently mistaken, is it not reasonable to conclude that others are equally liable to err? The surgeons of the Hôtel-Dieu of Paris are usually men of the first order of talents, of great scientific attainment, and of abundant experience; and yet we have here the most undeniable proof that they are often unable to discriminate between malignant and simple tumours. It is only by bearing in mind these facts that we are able to account, satisfactorily, for the unparalleled success which

* Amer. Journ. Med. Sciences, vol. xiv. p. 230, 1847.

† On the Nature of Cancer, by West, p. 84, London, 1840.

attended the practice of Hill, Nooth, Flajani, and a few other surgeons. Who can believe, for a moment, that these practitioners were good diagnosticians, or that many of their operations were not performed upon tumours entirely benign in their character? To come to any other conclusion respecting them would be to impugn the moral honesty of these men, or to assert that human nature and human disease were different then from what they are now.

Another source of difficulty is that the majority of the recorded cases of malignant diseases are deficient in necessary details; thus rendering it impossible to use them for statistical purposes. This remark applies both to our periodical literature, to our systematic treatises on surgery, and to our monographs on cancerous affections. As a proof of the truth of this remark, I may here state that one of the most interesting, and, in other respects, valuable works of the present day, the recent production of Dr. Bennett,* Professor of Medicine in the University of Edinburgh, hardly contains a solitary case available to our present inquiry. While it describes with great minuteness the histological characters of carcinomatous and cancroid diseases, as they appear in different tissues and organs of the body, it generally takes no other notice of the patient after operation than to say that he was discharged cured at such a time; meaning, of course, merely that his wound had healed, and not that he had been permanently cured of his cancer; a circumstance of which no operator can justly judge in so short a period.

To render such reports valuable and available to the interests of science, it is necessary that they should embody a full and connected history of the cases to which they relate; beginning with the earliest period of the disease, and tracing it through all its stages to its final termination in the patient's temporary freedom from relapse, his radical cure, or his death. To say that he has been discharged *cured*, when he has merely recovered from the effects of the extirpation, is absurd. Such a statement is of no benefit to the profession; for it throws no real light upon the final result of the operation. To enable us to do this, the patient should be diligently watched after the operation, with a view of determining whether he remains free from disease; or, if relapse occur, when and where it takes place, and what influence it exerts upon the parts and the system at large. Finally, there should, in all cases, be a careful examination of the morbid growth with the microscope, and a minute dissection

* On Cancerous and Cancroid Growths, Edinburgh, 1849.

of the body in the event of a fatal termination. To report examples of cancerous affections without these details, may be calculated to throw light upon the site, progress, symptomatology, and other circumstances connected with their natural history; but they can afford no useful information in regard to the results of surgical operations undertaken for their relief or cure.

It is for these reasons that the whole subject of operation for malignant diseases must be investigated *de novo*, before we can hope to arrive at any satisfactory conclusions respecting it. The next quarter of a century will, if practitioners are true to themselves and to their profession, definitively settle this long agitated, important, and momentous question. Let every description of cases be subjected to the knife and to escharotics; let every circumstance, even of the most trifling character, regarding them, be faithfully recorded; let the morbid structure be carefully examined with the microscope; and finally, let the patient be diligently watched with a view to his ultimate fate; and a thousand such cases, brought together and analyzed, will forever put the matter at rest. All conjecture will then cease, and truth will stand forth, like a beacon light, to guide and direct the practitioner in the true path of science.

But are we to make no use of the facts that have been furnished by ancient and modern observers? Are we to discard, as useless and effete, all our so-called knowledge upon the subject of malignant diseases, a subject which has occupied the attention of many of the wisest and ablest minds from the dawn of medical science up to the present moment? Are the results of the operations of Monro, Desault, Earle, Cline, Cooper, Dupuytren, Roux, Scarpa, Dieffenbach, Liston, Langenbeck, Physick, Warren, Mott, Gibson, Mussey, and others, to be repudiated as unworthy of confidence and regard? By no means. The labours of physicians and surgeons have not been in vain; but that they have failed to settle the question intrusted to the Committee, it would be folly to deny. They have elicited important facts, but facts of a negative rather than of a positive character; facts which are but as an *ignis fatuus*, calculated to mislead and entrap the young, the inexperienced, and the unwary. All our knowledge upon the subject must be re-examined and submitted to the ordeal of a stricter logic, and a nicer sense of discrimination. The sight is to be aided by the magnifying-glass, and the hand by the most delicate scalpel and forceps. Patience and perseverance are to take the place of haste and indifference; surgeons must be pathological anatomists, and pathological anatomists

must be microscopists. The cancer-cell must be found, recognized, and unravelled; mere external appearances must pass for nothing.

Let it not be supposed, from the above remarks, that I would encourage an indiscriminate resort to the knife. By no means. On the contrary, I would solemnly warn my professional brethren at large to abstain from operation altogether, and entreat them to unite in sending their cases to those men who, by their experience and opportunities, are fully competent to do justice to the subject, and who would thus contribute to furnish the light necessary to a full and final settlement of the question.

The duty of the Committee is to report upon the results of surgical operations in malignant diseases. What is a malignant disease? To this question, it is sufficiently easy to make a satisfactory reply. A malignant disease is one which, whatever may be its origin, situation, or structure, has a disposition, sooner or later, to destroy, not only the part, organ, or tissue which it occupies, but also the system at large, and, consequently, as a necessary corollary, the life of the patient. In other words, all its tendencies are to mischief and disorganization. It never forgives or relents; it never disappears spontaneously; and it is never cured by medication, not even by excision, except, perhaps, in very rare cases.

The mere fact that a disease returns after extirpation does not prove it to be malignant. The most benign tumour may, if it is not thoroughly exsected, repullulate, or sprout again, and, in due time, reacquire its original bulk. To be truly malignant, it must possess the properties which we have assigned to it in the preceding paragraph.

The affections which are usually arranged under this head are the different forms of carcinoma and melanosis. To these may be added certain forms of tubercular diseases, or rather, tubercular diseases of particular organs, as of the lungs and lymphatic ganglions. Certain cancroid affections, as they have recently been designated, particularly lupus, or noli me tangere, also belong to this class, and, therefore, require to be considered in this paper.

I am aware that tubercular disease is almost universally exeluded from the catalogue of malignant affections, and that, in assigning to it such a position, I lay myself open to the charge of oddity and obstinacy, if not positive ignorance. But is this a fact? How does the question stand? I will not assert that tubercular disease is always malignant, though its tendency nearly always is to destroy the parts into which it is deposited, or which serve as its nidus; I

wish merely to say, and I make the statement with all possible deliberation, that tubercular disease of certain organs, as, for example, the lungs, is as malignant, as unforgiving, and as incurable as any form of cancer of which we have any knowledge, or of which, in truth, we can form any conception. Nay, farther, it is not only malignant, but eminently malignant, destroying the tissues in which it occurs, and the life of the patient much sooner, on an average, than any form of carcinoma, excepting, possibly, encephaloid in its worst character. But it is different when tubercular disease shows itself in external and accessible parts of the body. Here, it is generally benign in its character, and amenable to treatment, at least comparatively speaking.

But, not to dwell upon this point, let us proceed to inquire more particularly into the practical part of our report; that is, into the nature of those diseases which, under the term malignant, as commonly received by the profession, usually form the subjects of operation. These diseases are scirrhus, encephaloid, colloid, and melanosis, of which the first three constitute the great and important group of cancers, carcinomatous diseases, or cancerous growths. Of the malignant character of these formations no one entertains the slightest doubt; for the experience of ages has amply established the fact in the observations of thousands, I had almost said, hundreds of thousands of physicians and surgeons.

All carcinomatous growths have a peculiar structure, of which a particular cell, now usually known as the cancer-cell, is the distinctive feature. This cell, for the discovery of which we are indebted to Lebert and other microscopic observers, has a definite form, size, and structure, and the faculty also of generating other cells, thereby enabling the disease to spread itself in such a manner as to form tumours, varying in their dimensions from a millet-seed to a man's head. These cells are microscopic in their character, and the malignity of the morbid growth is generally in proportion to their number and the perfection of their development.

In addition to the cancer-cell, there is, generally, especially in the more advanced stages of carcinoma, a peculiar milky juice, the presence of which is almost as characteristic of the disease as the cancer-cell itself. This fluid has long been recognized by pathologists, but the degree of importance to be attached to it, as a test of the cancerous or non-cancerous nature of morbid growths, has been chiefly insisted upon by Lebert, Walshe, and other recent observers.

The term *cancroid* has recently been applied to a class of affec-

tions, which, as the name implies, bear a close resemblance to cancer, but differ from it in not containing any cancer-cells and cancer-juice. Although capable of contaminating the adjacent lymphatic ganglions, they are generally tardy in their progress, and comparatively limited in their localization; they do not, moreover, make any serious inroads upon the constitution, and they are also less liable to return after excision. Hence they have been often considered as semi-malignant in character. They have also, of late, been occasionally described under the name of *epithelial* cancers, from the identity of their microscopic appearance with epithelium; the cells in each being the same. The number and variety of this class of maladies are not accurately determined, but those which are usually comprehended under it are certain forms of cutaneous ulcers, as lupus, or noli me tangere, and cancer of the lip, tongue, penis, scrotum, and the neck of the uterus. A cancroid affection may, during its progress, become the seat of the true cancerous deposit, and thus assume the worst forms of malignant disease; rapidly contaminating the neighbouring lymphatic ganglions, impairing the general health, and returning after extirpation.

It was observed, long ago, that lupus—one of the varieties of cancroid—and cancer, although supposed to be of the same nature, were not equally amenable to treatment. The former, it was noticed, often disappeared under the influence of mercury and sarsaparilla, while the latter resisted every mode of management that could be devised for its eradication. For these reasons, Dr. Denman,* early in the present century, concluded that there is no identity between the causes of these affections; a conjecture, the truth of which has recently been fully verified by the researches of Lebert and other microscopists.

It is proper to observe that the ensuing remarks are intended to apply more particularly to the various forms of cancer; melanosis is of comparatively unfrequent occurrence, and is, therefore, mentioned only incidentally. The term "operation," has reference mainly to excision, as this has been performed from time immemorial, especially in malignant diseases of the breast, and is almost the only operation thought of by the modern surgeon. The actual cautery and the ligature have long since become obsolete as means for removing malignant tumours; and as to the various escharotics, as arsenic, the Vienna paste, chloride of zinc, and acid nitrate of mer-

* Observations on Cancer, p. 29. London, 1810.

cury, formerly so much vaunted in the treatment of these complaints, their use seems to be confined chiefly to the hands of the empirics. One of the most able and scientific champions, of the present day, of this mode of destroying cancerous diseases, is Mons. Canquoin, of Paris, who has written an interesting and elaborate treatise to prove their superior efficacy. My young friend, Dr. J. Rowan Pirtle, has done me the favour to translate for me Canquoin's table, embracing twenty-nine cases treated by escharotics. By a reference to this table, under the head of Malignant Diseases of the Mammary Gland, it will be seen that nearly every instance is marked as successful. The reader will not fail to place his own estimate upon Mons. Canquoin's statements.

§ 2. ORIGIN OF MALIGNANT DISEASES.

The question has often been asked, is cancer a disease merely of the part in which it appears, or is it an affection of the constitution? As might be supposed, no uniform answer has been, or, perhaps, can be given to this question, although it has been agitated and discussed a thousand times by practitioners and medical philosophers. The subject is interesting, not merely in a pathological point of view, but eminently so in its practical relations; and hence it is a matter of deep regret that there should still be such a diversity of sentiment concerning it. Without going fully into the consideration of it, which my space will not allow, it may be safely assumed, nay, I think, it might be easily proved, that, while the malady, using the word in its genuine sense, is, generally speaking, of constitutional origin, it is also occasionally, though rarely, of a strictly local character, without any such antecedent or concomitant, as the term constitutional would lead one to suspect. What the relative frequency of this origin is, the present state of the science does not, unfortunately, permit us even to conjecture, much less to assert. My own belief is, and let it be understood that it is a mere belief, that cancer, in forty-nine cases out of fifty, if not in ninety-nine out of a hundred, is dependent for its production upon a peculiar state of the constitution, just as we find gout, rheumatism, scrofula, and some other affections, to be dependent for their production upon a disordered state of the general system. Nevertheless, who does not know that these complaints are occasionally of a purely local origin and character, unpreceded, and, for aught we can ascertain, unaccompanied by the slightest constitutional vice? In the same manner, cancer is sometimes a strictly local

disease, or, as Hunter would have expressed it, a disease not in the part, but of the part; a disease not localized by the system, but primitively and essentially established by the action and management of the part itself, without any constitutional concurrence or antecedence; consequently, without any vitiation of any kind, either of the fluids or solids. The proof of this position is to be found in those cases in which cancerous tumours, when excised, do not return; or where, if they do reappear, repeated operations may be performed, and the patient survive a long time without any evidence of constitutional dyscrasy, or infection of the neighbouring tissues. Several examples, bearing directly upon this point, will be brought forward in the progress of this paper; and there are few surgeons, of enlarged experience, that have not had occasion to witness the occurrence in their own practice.

It has been alleged that cancer is, occasionally, a local disease, because it is capable of being produced under the influence of local injury. But such a conclusion is erroneous; at all events, it admits of doubt whether such a result ever follows such a cause, unless there is a previous predisposition, a readiness, as it were, on the part of the system, to generate cancer-cells; else, why is it that external violence, as a blow or bruise, so seldom gives rise to this horrible and unmanageable complaint? Why, in other words, is it that a blow will produce cancer in one man and not in another; or, still farther, why will one man suffer and a thousand escape?

The theory of the local origin of cancer, not as an occasional circumstance, but as a constant occurrence, has had many advocates, and is far from being exploded at the present day. One of its most strenuous and influential abettors, in his day, was Sir Everard Home, who wrote an able and interesting treatise on this disease nearly fifty years ago. In the work here referred to, he expresses the opinion that carcinoma is in every case, at one precise period, local, in the strictest meaning of the word.* A similar view had been entertained long previously. Home considers the fact as clearly established by the history of several of his own cases.

Home, also, supposed that "cancer is not a disease which immediately takes place in a healthy part of the body, but one for the production of which it is necessary that the part should have undergone some previous change connected with disease."†

The doctrine of the local origin of cancer, as a general fact, was

* Observations on Cancer, p. 147. London, 1805.

† *Op. cit.* p. 147.

strenuously insisted upon in a discussion which followed the reading of a paper on cancer, by M. Cruveilhier, before the French Academy of Medicine, in 1844.* On that occasion, it was contended by a number of the practical surgeons of Paris, as Bérard, Lisfranc, Blandin, Roux, and others, that this lesion is always first local, and that the constitution is affected only secondarily, by the absorption of the carcinomatous poison. Their mode of reasoning reminds one of that of the syphilographer, who declares, and that very correctly, that there can be no contamination of the system without previous inoculation. Dr. Bennett† believes that cancerous growths are for some time purely local. I am unable to ascertain to what extent the idea of the local origin of cancer prevails at the present day in France and other countries. My opinion, however, from all the information I have been able to obtain, is, that it is on the decline, and that most practitioners are disposed to espouse the opposite side of the question. This, I think, is certainly the case in England and in the United States. It need hardly be added that the doctrine involves important practical considerations. To these, allusion will be made in their proper place.

Another question of great practical importance connects itself with the one just discussed. This is, whether a tumour, of a non-cancerous character, may, in its progress, become cancerous? whether, in other words, such a growth is capable of undergoing what is called the carcinomatous degeneration? It seems to me that it is not difficult to give a correct answer to this question. If the term "degeneration" is restricted to its true and legitimate signification, then we must reply in the negative, for no tumour, whatever be its structure, can, by a mere conversion or transformation, pass into a malignant condition. Such a change can be effected only under the influence of a vital process, involving the development and actual existence of the cancer-cell; and I cannot, for my own part, see any good reason why a new growth, tumour, or deposit should be more exempt from such a disease than a primitive, original, or pre-existing tissue, whatever be its structure. Nay, indeed, may it not be supposed, that the more feebly a part is organized, the more prone will it be to take on such a process? That this change does occasionally occur, may be inferred from the circumstance that tumours, believed to be cancerous, but which cannot positively be proved to be of this

* Am. Journ. Med. Sciences, vol. xiv. p. 230, 1847.

† On Cancerous and Cancroid Growths, p. 232.

description, remain, occasionally, in a state of latency for ten, fifteen, twenty, and even thirty years, and then, all of a sudden, manifest a malignant and destructive action, generally followed by the worst consequences. Is it possible to keep the cancer-cell in check for such a length of time? The occurrence is, perhaps, possible, but of its probability we are entirely ignorant. To admit more than this, would be to wander beyond the proper limits of observation and induction.

It would be of great practical utility if we knew the origin of cancer, or if we were acquainted with the causes, local and constitutional, under the influence of which malignant diseases, properly so called, are developed. But upon this subject, unfortunately, we are entirely ignorant, nor is it likely that our inquiries concerning it will ever lead to a satisfactory and philosophical solution of a question which has occupied the best minds in the profession from the most remote periods of medicine down to the present time. *All that we know, with any degree of certainty, is, that we know nothing.* Such a confession is humiliating enough, but it would savour alike of folly and of knavery, if, in order to conceal our chagrin, we were to attempt to substitute ignorance for fact, and specious reasoning for solid and substantial argument. The day for such a course is passed; the present age is an age of progress, and an age of realities, not of speculation and conjecture.

Several microscopical observers have shown that the cancer-cell occasionally exists in the general circulating mass. But what does this fact prove, granting it to be so? Does it prove that the cancer-cell is originally formed in this fluid; or is it not more reasonable to conclude, from our knowledge of the nature of the blood, and the office of the vessels in which it is contained, that it finds its way into it through the agency of the absorbents, whether we regard this function as being performed by the lymphatics alone, by the veins alone, or by the joint operation of both? If we admit the truth of the first of these conjectures, then it follows, as a matter of course, that all idea of excising cancerous tumours is to be abandoned, as utterly futile. If, on the other hand, we give our assent to the correctness of the other conclusion, the picture will certainly be of a more gratifying character, and hope will not be entirely banished from the mind of the operator. It seems to be pretty generally believed, that, when cancer has existed for any length of time in a particular part of the body, it has a tendency to contaminate the blood; and hence the doctrine, inculcated by so many writers and

teachers, that the disease should be removed at the earliest possible moment after its formation, in order that such a contingency may, if possible, be averted.

§ 3. HEREDITARY NATURE OF MALIGNANT DISEASES.

Carcinoma is sometimes *hereditary*. The occurrence, however, is, I am satisfied, much less frequent than is generally supposed. Writers and practitioners, in speaking and thinking of this matter, seem to forget that there is a difference, and that a very wide one, between the transmissibility of this disease from the parent to the offspring, and its coexistence, or successive development, in different members of the same family. The latter occurrence, although also very infrequent, is much more common than the former, of which my own experience has supplied me with only a few examples. Lately, I saw a lady from Tennessee with a well-marked cancer of the mammary gland, whose mother and maternal aunt had died of the same disease. In the summer of 1850, I prescribed for an aged female with a cancer of the lip, whose mother had perished from cancer of the breast, and the father from cancer of the tongue. But the best and most instructive instance probably upon record is that related by Professor Warren, of Boston, in his work on Tumours. It occurred in a family in the neighbourhood of that city, and is given with circumstantial minuteness. A man died of cancer of the lip; his son had a similar disease in the breast, from which, after having undergone an operation at the age of sixty, he finally lost his life. Two of his sisters had cancer of the mammary gland; were operated upon; and ultimately died from a relapse of the malady. A daughter of one of the ladies had a cancer of the breast, which Dr. Warren removed at an early period; she recovered, but perished some years after from disease of the uterus. A daughter of the gentleman had a cancer of the breast, and there is reason to believe that other members of the family were affected by the same malady.

The paper of Dr. J. Mason Warren, accompanying this Report, presents a remarkable case, marked No. 15, of the hereditary predisposition to cancer developed in early life under the influence of external injury. In another case, still more remarkable, a man who died of cancer of the penis, lost his father, grandfather, and great-grandfather from the same disease.

More frequently, as has been already stated, the disease occurs, either simultaneously, or successively, in several members of the same

family. My own practice has afforded me a number of instances of the kind, and there is hardly a writer on carcinoma that does not narrate examples of it. In one remarkable case in this city, four out of six members of one family have died of the disease; one from cancer of the uterus; another from cancer of the side and mammary gland; a third from malignant polypus of the nose; and the fourth from carcinoma of the thoracic viscera. Professor Gibson* gives an instance of cancer of the breast in four sisters. The two eldest were operated on in North Carolina, and both died from a return of the malady. In the third case, the excision was performed by Dr. Gibson, and there was no relapse ten years after. In the fourth case, the operation was performed by this gentleman in 1835, with every prospect of success, but the final result has not transpired. Bayle gives a number of similar examples. Thus, of a family composed of five members, one had cancer in the breast, one in the face, and one in the stomach. In another family, the father died of cancer of the tongue, and a son of noli me tangere of the face. In a third, the malady existed in three members, respectively, in the womb, the breast, and the neck. Finally, in a fourth family, consisting of seven members, one died of cancer of the bladder, another of cancer of the breast, and a third of cancer of the brain.† Examples of a similar character are narrated by Sir Astley Cooper‡ and other writers. I shall have occasion to revert to this subject by and by.

§ 4. LATENCY OF MALIGNANT DISEASES.

Cancer is sometimes a latent disease; that is, after it has reached a certain point of development, it remains in a state of quiescence, apparently neither advancing nor receding. The period of dormancy varies, in different cases and under different circumstances, from several months to several years. In the case of an elderly lady, the wife of a Baptist clergyman of this State, and the mother of one child, the malady has continued stationary for upwards of twenty years; the tumour occupies the mammary gland, and possesses all the external characters of scirrhus, being exceedingly hard, and the seat of occasional sharp, lancinating pains. Many years ago, this lady consulted Professor Dudley, of Lexington, who unhesitatingly pronounced the disease cancerous, but advised against

* Institutes of Surgery, vol. i. p. 163, 1845.

† Dict. des Sciences Méd. art. Cancer, t. 3, 677. Paris, 1812.

‡ Lectures on Surgery, by Tyrrell, p. 263. Philadelphia, 1835.

an operation. The general health has usually been good, and the local suffering has been all along very slight. She has recently passed the critical period, and still the tumour remains indolent.

Sir Benjamin Brodie* saw a case where the cancer remained quiescent for twenty-five years, and where the woman died at last, not from disease of the breast, but from effusion into the cavity of the chest. Dr. Babington, of London, knew an instance in which a schirrous tumour of the breast was stationary for twenty-four years; and Sir Astley Cooper† attended two females, in whom the period of latency of this affection amounted, respectively, to seventeen and twenty-two years. Mons. Leroy, in his *Memoir on Cancer*, read before the Royal Academy of Sciences of Paris, in 1843, refers to the case of a *réligieuse*, who laboured under scirrhus of the mamma for twenty-five years, and who at the end of that time was able to perform all her duties in the hospital. Mr. South‡ alludes to a similar case. Dr. Macfarlane, of Scotland,§ has seen instances of ten, fifteen, and twenty years of this kind of latency. Indeed, there is reason to believe that the occurrence is more frequent a good deal than is generally supposed. The fact is not without interest in its practical relations.

§ 5. CIRCUMSTANCES CONTRAINDICATING SURGICAL INTERFERENCE.

The following circumstances are generally enumerated by writers and teachers as contraindicating the removal of malignant tumours. A reference to the opinions of American, English, French, Dutch, and Italian authors, cited in this Report, will show the remarkable coincidence of views upon most of the topics comprised under this head.

No operation should be performed when the disease is congenital, or when it manifests itself soon after birth. Under such circumstances, a resort to the knife is almost certain to be followed by relapse, and that, too, in a very short time, owing to the fact, probably, that the system is saturated, as it were, with the cancerous poison. Cases of this kind are peculiarly virulent and intractable, resisting all attempts at cure, or frequently even at palliation, and rapidly tending to fatal termination. The occurrence of the disease

* Select Surgical Works, p. 222, Phila. 1847.

† Lectures on Surgery, by Tyrrell, p. 268, Phila. 1835.

‡ Chelius's Surgery, vol. iii. p. 509, Phila. 1847.

§ Amer. Journ. Med. Sciences, vol. xxiii. p. 221.

in several members of the same family may also be regarded as contraindicating ablation, inasmuch as it is denotive of a constitutional proclivity to malignant action.

Interference should be avoided when the disease exists in several parts of the body, as, for instance, when it affects the mamma and the uterus, or the testicle and the eye. Although all these organs are accessible to the knife, yet a resort to it under such circumstances would be highly injudicious, inasmuch as it cannot possibly eventuate in any permanent good, but, on the contrary, be almost sure to hasten the patient's destruction. No surgeon, however reckless, would think of operating when the external disease is associated with carcinoma of an internal part. The coexistence of cancers in different organs or tissues, generally denotes a bad state of the system, prohibiting surgical interference.

Operation is never resorted to, at least not as a curative agent, when the malady has made great and rapid progress, or when it has broken through its original confines, and invaded the adjacent tissues. Thus, in cancer of the mamma, no surgeon who values his reputation, or has any regard for the welfare of his patient, thinks of interfering where there is great bulk of the tumour, or firm adhesion of the breast to the surrounding parts; where the skin is changed in structure, ulcerated, indurated, or dimpled; where there is retraction of the nipple, or enlargement of the axillary, subclavicular, or sternal lymphatic ganglions; where there is œdema, with numbness and loss of function in the corresponding limb; and finally, where, in addition to some of the symptoms just mentioned, the features exhibit all the evidences of a cancerous cachexy. The same circumstances guide the surgeon in carcinoma of the testicle, of the eye, lip, penis, and extremities. If the knife is ever employed when the malady has made such progress and such inroads, it is with a view solely to palliation, not to cure. Of the propriety of such a course, every surgeon must be his own judge.

When the disease advances very rapidly, as it not unfrequently does in encephaloid, breaking through its original boundaries, and leaping, as it were, suddenly into the surrounding tissues, it may be assumed, as a general rule, that ablation will be improper; or that, if had recourse to, a rapid repullulation will be the consequence. Rapid growth, constituting what some have denominated the acute form of malignant action, always implies a bad state of the constitution, and imperatively forbids surgical interference. There is another symptom which is equally portentous, but which has not, I think, en-

gaged sufficient attention. I allude to the œdematous appearance of the parts immediately around the morbid deposit, or at a distance more or less remote from it. This condition, which is seldom absent in external carcinoma in its latter stages, is not unfrequently present, at an early period, in encephaloid and the hæmatoid variety of this affection, and always denotes the very worst state of things, both local and constitutional. The immediate cause of this symptom is obstruction of the lymphatic ganglions and vessels. My observation has taught me that nothing but mischief is to be expected from interference when the malady has attained this crisis.

I find that many of the authorities which I have examined, in the progress of my labours as Chairman of this Committee, speak discouragingly of ablation when the malady has supervened suddenly upon suppression of the menses prior to the usual period for the stoppage of this discharge. Even great irregularity of this function is considered by some as a sufficient reason for declining surgical interference. Flajani lays much stress upon these circumstances, especially the former; and Bayle and Cayol stated long ago that the period of the cessation of the menses and the age of confirmed virility are those in which the cancerous diathesis is apt to exist in its greatest intensity.* Neither my own experience, nor that of my friends, furnishes me with any facts illustrative of the truth or falsity of this opinion.

A quickened state of the pulse, occasioned by the local irritation, augurs unfavourably. Excision, performed under such circumstances, is nearly always followed, it is said, by speedy relapse; and it is, therefore, the duty of the surgeon to discountenance it. This point is particularly dwelled upon by several of the older writers, but I find no authority for it among our contemporaries and immediate predecessors.

Temperament is supposed to exercise some influence upon the result of excision, and may therefore be considered, perhaps, as contraindicating the operation. Dr. Macfarlane, of Glasgow, observed that the disease was more apt to reappear and to prove disastrous after extirpation in robust females of sanguine temperament than in nervous or lymphatic persons; and Sir Benjamin Brodie has found that hysterical women are especially unfit subjects for operation. My impression, however, is, in respect to the latter writer, that his remark has reference not so much to the greater liability of

* Dict. des Sciences Médicales, art. Cancer, t. 3, p. 673, Paris, 1812.

this class of females to suffer from relapse as to their greater liability to suffer from the immediate effects of the knife. I think it is generally conceded that fat, nervous, and hysterical persons are very apt to perish from all operations attended with much shock or loss of blood, neither of which they are able to bear well.

Latent cancers should not be interfered with. Cases have occurred again and again, in which, from neglect of this precaution, the patient has lost his life, within a very short period after operation, from a return of the disease in its worst form. Dr. Macfarlane* refers to instances where persons, after having laboured under malignant disease for ten, fifteen, and twenty years, with hardly any suffering, were cut off in a few months by an operation. In such cases, the reproductive powers of the part, if not of the system generally, manifest an astonishing activity, and the consequence is that the malady soon accomplishes its work of destruction.

It is not necessary here to insist upon the propriety of refraining from operation when there is serious disease of an important internal organ. Such a complication could hardly fail to predispose to relapse, if not to the speedy destruction of the patient. Especially is it important that there be no organic affection of the heart and kidneys, the due performance of whose functions is so essential to the maintenance of a healthy circulation and the efficient and thorough depuration of the blood. The absolute necessity of avoiding capital operations, under such circumstances, has long been acknowledged by scientific men, but has not been sufficiently insisted upon in cases of malignant disease.

Another objection that has been occasionally alleged against this operation, is the danger which sometimes attends its performance. This danger, which may be either immediate or secondary, is unquestionably real, though there is no doubt that it has been much exaggerated. My own practice has furnished me with two cases of this sad occurrence; in both, the females were unusually fat; they lost each a considerable quantity of blood, perhaps a pint, during the operation, and in both, death was caused by erysipelas; in one, on the sixth, and in the other on the eighth day. Dr. Macfarlane,† of Glasgow, lost two patients out of thirty-two operated on for the cure of this affection; one died from erysipelas, and the other from

* American Journal of Medical Sciences, vol. xxiii. p. 221; also, Walshe on Cancer, 238, London, 1846.

† Amer. Journ. Med. Sciences, vol. xxiii. p. 221.

pleurisy. Sir Astley Cooper* met with five deaths from this cause, in a practice extending through many years, and involving a large number of cases. Two of his patients perished from erysipelas, one from pleuro-pneumonia, one from the immense size of the wound, and one from advanced age. Mr. South† gives an instance which proved fatal from hemorrhage, almost before the completion of the excision; the breast was of great bulk, and the blood gushed out in torrents, so that a large quantity was lost before it could be controlled by the operator and his assistants. The late Mr. Abernethy‡ states that he has known a patient to die soon after an operation for the removal of a carcinomatous tumour of no great magnitude, merely in consequence of the shock imparted to the system. He has seen other cases, where the diseased state of the wounded parts seemed to have been the chief cause of the speedy death of the individual. Dr. Benedict,§ of Breslau, mentions two cases which proved fatal from exhaustion, out of ninety-eight operated on for carcinoma of the mammary gland. Sir B. C. Brodie states that he has lost patients from the immediate effects of the operation, and every surgeon has had the same misfortune. Not a few examples might be cited from the older writers, where death followed the extirpation of the mammary gland for the relief of this class of affections; but as this would subserve no useful purpose, I shall omit them.

Of thirty-nine persons operated on, for cancerous disease, at the Hôtel-Dieu, and in private practice, by the late M. Blandin, of Paris, seven died from the immediate effects of the excision.‖ In the Massachusetts General Hospital, at Boston, of seventy-five cases of cancer of the mamma five perished from the operation; two from erysipelas, and three from internal disease which existed at the time of the excision, and should have prevented its performance.¶

Thus it will be seen that excision itself is not often followed, except, perhaps, in Paris, by fatal results; not, indeed, nearly as often as some other capital operations, such, for example, as amputation, lithotomy, and the ligation of arteries. I am, therefore, induced to believe that it should not, in the slightest degree, enter into the con-

* Lectures on Surgery, by Tyrrell, p. 273, Phila. 1835.
† Chelius's Surgery, vol. iii. p. 541, Phila. 1847.
‡ Surgical Works, vol. ii. p. 125, Amer. edition.
§ Rust's Magazine, No. ii. vol. xliv.
‖ Broca, Mém. de l'Académie de Médecine, t. 16, p. 752, Paris, 1852.
¶ Dr. Parkman, Amer. Journ. Med. Sciences, vol. 16, p. 305; 1848.

sideration of the case; or, in other words, that it should never of itself prevent the surgeon from using the knife. It is well-known that, in certain cases and in certain circumstances, the most trifling operation is sometimes followed by the speedy death of the patient, thus humbling the pride of the surgeon and deriding his prognosis As a general rule, it may be stated, I think, that fat, corpulent, and indolent women, with large breasts, are more apt to suffer in this way than any other class of persons. They are certainly ill able to bear the loss of blood and the shock of the operation; and they are also, according to my observation, very prone to attacks of erysipelas, often of a severe and obstinate character. With proper attention, however, during the operation, and a proper preparation of the system, the surgeon will rarely be obliged to witness the unfortunate result in question.

§ 6. REPRODUCTIVE TENDENCY OF MALIGNANT DISEASES AFTER OPERATION.

Of the reproductive tendency of carcinomatous diseases, after extirpation, or destruction by the actual or potential cautery, writers have made mention from the earliest periods of medical science to the present time. Hippocrates was fully aware of the fact, and entered his protest against all operative proceedings, under the conviction that, however early, or well executed, they could not possibly afford any permanent relief, or guard the patient against a return of his malady. Similar views have been advanced by nearly all succeeding writers. If a different sentiment has occasionally been expressed, as has happened in a few instances, it has been by men who have had a very imperfect knowledge of the disease, who have been poor observers, or who have wilfully concealed the truth, from interested and dishonest motives.

The period at which relapse occurs varies from a few weeks to a number of years. On an average, it may be stated to be from four to six months. Occasionally, it takes place within an almost incredibly short period. In one of my cases the malady returned in less than three weeks. The original disease was of eight months' standing, and was seated in the left mammary gland, which it involved nearly in its whole extent; the nipple was somewhat retracted, and there was a slight enlargement of one of the lymphatic ganglions, which was removed in the operation. The dissection was performed with much care, and every particle of the morbid structure was

apparently cut away; the greater portion of the wound united by the first intention, but a part at the centre remained open, and became the starting-point of the new growth. The woman, who was about forty-six years of age, died three months after the operation, after having endured the most horrible torments.

Sometimes a relapse does not take place until the end of the first year; and in a few instances it is postponed to a later period, as the expiration of the second, third, and even fourth year. Broca states that about two-thirds of the relapses appear during the first six months after the operation, and at least three-fourths before the end of the first year.* I am not able to say how far this assertion is borne out by the experience of other surgeons; but it does seem to me to be more favourable than the results of the profession generally upon this subject would warrant.

All malignant diseases possess this tendency to relapse after ablation, but not in an equal degree. Encephaloid undoubtedly enjoys it to a far greater extent than scirrhus, and scirrhus much more than colloid. Melanosis, the black cancer of Alibert and Dupuytren, also relapses with great frequency and promptness, and may be placed as next to encephaloid in this respect. Again, it must be borne in mind that a genuine cancer is more certain to return than a cancroid affection, as well as more apt to prove rapidly fatal.

The reproductive tendency of malignant disease, especially of that form of it known under the name of encephaloid, after operation, may be illustrated by a reference to cases, of which I select the following as examples in which the fairest trial was given to this mode of treatment without any ultimate advantage.

The first case which I shall relate is mentioned by the late Mr. Allan,† of Edinburgh, and is one of the most remarkable on record. The patient, in 1805, at the age of twenty-three, observed upon his left hip a movable and elastic tumour, not larger than a hazel-nut. About five years afterwards, when it had attained the bulk of a child's head, it was removed by Mr. Newbigging; the wound healed kindly; and the man was apparently well. At the end of nine months, however, it began again to grow, and in seventeen months from the time of the first operation, it was cut out by Mr. Russell, the tumour being as big as two fists. The patient remained seemingly well for nine months, when the morbid growth returned, and

* Mém. de l'Académie Nationale de Méd. t. 16, p. 742.

† Pathological and Operative Surgery, vol. i. p. 264. Edinb. 1821.

gradually increased until it acquired the size of a very large mamma; the skin was much inflamed, and a part of the tumour was ulcerated, protruding a dark-coloured sphacelating substance. Mr. Allan now removed it, along with the skin, leaving a raw surface, of the diameter of the crown of a hat, which was completely cicatrized in a month. The disease was now apparently eradicated, for the man enjoyed good health, and resumed his work. In seven months, however, it again returned, and growing more rapidly than at any former period, it attained in two months nearly the same volume as when last extirpated. Mr. John Bell was next consulted, and removed the tumour, now as big as the head of a child of eight years, along with a great portion of its integuments. The wound healed kindly, as before, and when it was reduced down to the size of a crown-piece, it was kept open as an issue, to invite a free discharge of matter. The health continued good till March, 1815, when the tumour showed itself a fifth time. In December, it had acquired an extraordinary volume, and was the seat of a large fungus, resembling a cauliflower in appearance. This, Mr. Allan destroyed by ligature in June, 1816, with partial recovery of the general health. A year subsequently, the tumour was of enormous dimensions, measuring three feet in circumference at the base; the discharge was very profuse, and the general health became so much impaired that the man died exhausted in January, 1818, thirteen years after the commencement of the malady, and nearly eight years from the time of the first operation. All the viscera were found to be perfectly sound, except the liver, the left lobe of which contained a few hard tubercles, about the size of barley-corns.

The next case has been furnished by M. Broca,* and is, perhaps, still more extraordinary. It came under the observation of the late Professor Blandin, the eminent Parisian surgeon. In this case, the patient had an encephaloid tumour, of the size of a turkey's egg, on the left side of the trachea, which, rapidly augmenting, threatened to destroy him in a few months. In 1844, when on the point of ulcerating, it was removed. The wound from the operation speedily healed. In five months, the disease returned, and a second operation was performed, in August, 1844. Five months passed without relapse, when the tumour reappeared, and the knife was again used in March, 1845. The man now remained well for a whole year,

* Anatomie Pathol. du Cancer, Mém. de l'Acad. Nationale de Médecine, t. 16, p. 756.

when, rearing its head again, the morbid growth was extirpated in April, 1846. At the end of ten months it reappeared, leading to the necessity of a fifth operation, which was performed on the 23d of March, 1847. The parts were well in a few days; and for nine months the patient enjoyed an immunity from his tormentor. The sixth operation was performed on the 2d of February, 1849; but this time the wound united less promptly, and the cicatrization was not completed till the 23d of the month. In five months, the malady reappeared; the man came again to Paris, but finding that Blandin was dead, and being unwilling to intrust his case to any other surgeon, he went home to submit himself to his inevitable fate. He lingered till the autumn of 1850; the tumour, in the mean time, forming an enormous mass, extending from the parotid gland to the clavicle. The signs of constitutional infection existed in the highest degree.

It will be perceived from the history of this case, that, counting the intervals between the relapses and the operations of which the poor patient was the victim, he enjoyed nearly four years of health. This period might, doubtless, have been augmented, had the man not abandoned himself to despair upon finding that his surgeon was no longer alive. "Is this case not sufficient," asks M. Broca,* "in the existing state of the science, and in the absence of any specific remedies that may hereafter be discovered, to show that an operation for the removal of cancer ought always to be performed whenever it is possible to satisfy ourselves that there is no constitutional contamination?"

The following case, related by M. Jobert,† of Paris, illustrates this tendency to relapse when the cancer is situated near the eye. The patient, when first seen by this distinguished surgeon, in October, 1849, was forty-two years of age. Her health had been quite good till 1834, when she observed a small tumour under the right superciliary ridge, which, as it was the seat of severe pain, was removed in August of that year, when only the size of a grape-seed. The wound promptly cicatrized. Between November, 1834, and April, 1835, a similar tumour was developed at the same spot, and was excised along with the lachrymal gland by Cloquet. The wound was healed in a month, and for two years the parts remained well.

* *Op. cit.* p. 757.

† Gazette des Hôpitaux, 1849, No. 143; also Brit. and Foreign Medico-Chir. Rev. April, 1850, p. 545.

At the end of this period, while the woman was apparently in perfect health, three little tumours were observed at the old cicatrice, and gradually involved the surrounding structures. She bore her sufferings for three years, when, in 1842, extirpation was performed by Lisfranc. The wound healed in twenty-six days. She continued quite well for one year, when another little swelling appeared just above the lachrymal carunele, which was afterwards removed by a young surgeon. After a respite of two years, the malady reeurred at the cicatrice, and finally involved the eye. Having borne her sufferings for four years, she at length, in April, 1849, fell into the hands of Jobert, who extirpated the entire eye. Cicatrization readily oeeurred, but in three months the disease showed itself again, not at the original site, but in the orbitar surfaee of the inferior lid. This, too, was extirpated in November, 1849, and the parts perfectly healed.

It will thus be seen that the poor woman, in this case, underwent not less than six operations; and that no effort was spared, as far as the knife is eoneerned, to relieve her from her persecuting malady. If, as the reporter observes, the resources of art were not as complete as might be desired, it eannot be doubted that they have secured to the patient a prolongation of her life, and several years of tolerable comfort. It is to be regretted that no mention is made as to the faet, whether these tumours were epithelial or cancerous. It is hardly presumable that they were of the latter charaeter, inasmuch as the intervals between the relapses were, with the exeeption of one, unusually long, and inasmueh as the general health remained throughout unimpaired. It is equally to be regretted that we have no knowledge of the final result of the case.

The next ease which I shall mention occurred in my own praetice. The results have been already made known, in part, in the *Western Journal of Medicine and Surgery* for 1852. A man, aged 32, consulted me in April, 1851, for a tumour of the lower jaw, which he had first notieed three months ago; it was firm, elastic, free from pain, of a pale-red eolor, and attaehed to the gum and jaw, extending from the ramus to the first bieuspid tooth. Two operations had been already performed upon it, each being followed by rapid relapse. On the 27th of April I removed the parts, along with the eorresponding portion of the jaw; and, early in September, he wrote me that the disease had returned. On the 24th of that month I operated upon him a seeond time, removing the whole of the new growth, which was about the size of a pullet's egg, and about three-quarters

of an inch of the anterior extremity of the ramus of the bone, from which the diseased structure seemed to spring. On the 31st of August, 1852, I excised the ramus at the articulation, the disease having attacked its inferior extremity. The man remained well until the winter of 1853, when the disease broke out in front of the ear, and now forms a tumour of the size of a small fist. It is worthy of remark that the general health has been all along pretty good, and that the wound has always healed well after each operation. A farther account of this case will appear under the head of Cancer of the Jaw.

A most extraordinary instance of this tendency in cancer to relapse after excision, is mentioned by Professor Sidillot, of Strasburg.* It occurred in a woman, aged thirty-five, who had a cancer of the knee, which had been extirpated nine times. It was removed for the tenth time on the 15th of July, and, again returning about six weeks after, the thigh was amputated on the 6th of November. The limb remained sound, but the patient died, a year after the last operation, of cancer of the lungs.†

The subjoined case, sent me by Dr. Alexander Barclay, of Newburg, Orange County, New York, is one of the most remarkable on record.

John Nolty, aged 43, shoemaker, of a sanguineo-nervous temperament, applied to Dr. Barclay on the 23d of March, 1844, on account of a cancerous ulcer, involving two-thirds of the lower lip; its edges being everted, and its surface hard and irregular, accompanied with violent, lancinating pains. The disease had been first noticed about three years ago as a wart, the origin of which was ascribed to the use of a tobacco-pipe. There was no enlargement of the ganglions in the neck or under the chin. The parts were removed in the usual manner, and the wound healed by the first intention.

The man applied again to Dr. Barclay early in December, 1845, on account of an immovable bony tumour of the lower jaw, extending from near the symphysis to the angle. It seemed to involve only the outer plate of the bone, was exquisitely painful, and was accompanied by severe inflammation of the soft parts. It had commenced about six months previously, and had grown rapidly up to the present time. The whole of the morbid mass was now removed with the saw, chisel, and mallet, the operator leaving the internal plate and alveo-

* Recherches sur le Cancer, Obs. 30, p. 99.

† Bennett on Cancerous and Cancroid Growths, p. 260.

lar process of the bone, as they appeared to be sound. The diseased soft structures were also excised; the hemorrhage was excessive; and, in about two weeks, the wound was completely cicatrized.

On the 26th of May, the patient again presented himself for the purpose of an operation, which was performed on the following day, and which consisted in the removal of the piece of bone left at the previous operation in December, 1845.

In eighteen months the disease reappeared in the remaining portion of the jaw-bone. Dr. Barclay declining all further surgical interference, the man consulted Dr. Blackman, of Newburg, who exsected the portion of the bone containing the rest of the molar teeth. The disease, again showing itself, was now removed by Professor Parker, of New York, the exsection embracing a portion of the ascending ramus of the jaw.

Twelve months after this the disease returned, and the man again solicited Dr. Barclay to perform an operation, which, however, he declined. The tumour increased with great rapidity, pressing inwards upon the tongue, so as to impede respiration and deglutition. He struggled hard for life, but became much emaciated, and died in June, 1851.

In this case not less than five separate operations were performed; that they had the effect of prolonging the patient's life, no one can doubt. Death took place about ten years after the first appearance of the malady, and a little upwards of seven years after the first operation.

I am indebted to Dr. Charles S. Tripler, U. S. Army, for the following history of a case of encephaloid of the thigh, remarkable for the length of time which elapsed between the operation and the patient's death.

An officer of the army, 22 years of age, of nervous temperament, and accustomed to much exercise on horseback, noticed, in 1841, a small tumour, not larger than a pea, at the upper and inner part of the thigh. In the spring of 1843, when first seen by Dr. Tripler, it was of the volume of a small hen's egg, somewhat painful, and steadily, though slowly, increasing in bulk. In June, 1844, when this gentleman again saw the case, the local symptoms were, in every respect, worse; and, although the general health was apparently good, yet there was some evidence of the cancerous cachexy. The tumour was now removed by the knife, and was found to weigh five ounces and a half; its structure being, to all appearance, encephaloid. It was situated beneath the femoral aponeurosis, upon the

adductor muscle, and was partially overlapped by the gracilis and sartorius; portions of which, as they were implicated in the morbid mass, were necessarily excised. The wound did well, and the man soon rejoined his company. In September, 1845, while stationed at Corpus Christi, in Texas, he suffered with dysentery, which induced him to visit Pennsylvania, and quit the army. Recovering from this affection, he laboured for some time under diarrhœa, though, in other respects, his health was good. Late in the spring of 1847, the tumour reappeared, and increasing slowly, attained, by the ensuing autumn, the volume of a hen's egg. In the following summer, when it greatly augmented in bulk, extending eight inches down the thigh, and causing constant pain, he consulted the late Dr. George McClellan, of Philadelphia, who refused to operate upon him; assigning, as a reason, that he would not be able to withstand the shock and loss of blood attendant upon the undertaking.

From this time on the patient gradually sank, and died in June, 1849, five years after the extirpation of the original tumour. The secondary growth at this time, extended half way round the thigh, and was of great size, weighing, as was supposed, about eight pounds.

The following facts are added in further illustration of this interesting subject.

A female, from whom Sabatier removed a cancerous tumour of the breast, of large size, enjoyed excellent health for ten years, when she experienced a relapse. A second operation was performed, and the malady had not returned when the case was reported, some considerable time after. An officer, treated by the same distinguished surgeon, also for a carcinomatous affection of the mamma, had undergone three operations, and was in good health when the facts were published.* Lacombe, in his work on cancer,† narrates, with much minuteness, the case of a mantua-maker, aged 49, who was operated upon four times for a similar disease, and in whom no relapse had taken place at the end of five years. In a discussion on this subject, some years ago, before the Academy of Medicine of Paris, Professor Roux referred to the case of a man upon whom the celebrated Boyer had performed five successive operations for a carcinomatous tumour of the left shoulder, and in whom there was no recurrence of the morbid action three years after the last excision. He was also cognizant of the case of a lady, in whom there was no trace of cancer

* Médecine Operatoire, t. iii. p. 365. Paris, 1824.

† Proposition sur le Cancer, Paris, an. xiii.

after six operations, performed, in the space of three years, by himself and another surgeon, for a malignant tumour of the mammary region.*

§ 7. GENERAL RULES RESPECTING THE MANNER OF CONDUCTING EXCISION OF MALIGNANT DISEASES.

When excision is determined upon, it is a matter of paramount importance that it should be performed in the most thorough and complete manner, in order that the parts may be effectually guarded against relapse. The slightest atom of the new tissue, the most minute cancer-cell, nay, possibly, the smallest particle of cancer-juice, may, if left behind, endanger a reproduction of the malady. Upon this subject there is such a universal agreement of opinion, that it would be folly to cite any authority in its support. The practice is sanctioned alike by the dictates of common sense and the results of general experience.

It does not fall within the province of this paper to give an account of the methods by which malignant tumours should be removed; but there are a few points to which I deem it my duty to advert, in a special manner, in connection with the subject, inasmuch as attention to them must exert an important influence upon the great question which I have been examining.

The first of these points, and one, as just stated, of paramount consequence, is, that every particle of the heterologous substance should be removed along with the tumour. To accomplish this important object, it is necessary that our incisions should always be carried through the healthy tissues at some distance from the morbid deposit. Should any part have escaped the knife in the first instance, it should be traced out immediately after the extirpation of the main mass, and be excised with the most scrupulous exactness. Free use should be made, in this stage of the operation, of the sponge and the finger; of the former, for the purpose of clearing away the blood, and of the latter, for the purpose of ascertaining the consistence of the parts which constitute the surface of the wound. The sight alone should never be trusted in a case of this kind, for appearances are much more deceptive than the sense of touch. Not a particle of substance that is in the least suspicious should be left behind. Skin,

* Bulletin de l'Académie de Médecine, Mars 26, 1844; also Compendium de Chirurgie Pratique, par Bérard and Denonvilliers, t. i. p. 695. Paris, 1840.

muscles, glands, vessels, nerves, and bones should all be sacrificed, if necessary to the success of the operation. Nay, the very atmosphere of the disease should be destroyed; and with this view it would be well to adopt the practice of the celebrated Scarpa, of removing an amount of healthy substance equal or nearly equal to the abnormal.

Secondly. The operator should always endeavour to preserve as much of the common integuments as possible, in order to afford a complete covering to the surface of the wound. This rule is one of great importance, and should never be departed from. Another precept, of nearly equal consequence, but one which has not hitherto been sufficiently insisted upon, is to preserve as large a quantity as practicable of the subcutaneous cellular tissue, with a view of maintaining, unimpaired, the cutaneous circulation. Whenever this is much interrupted, as it necessarily must be by a very close dissection, there is additional danger of a speedy return of the abnormal action.

Thirdly. When only a portion of an organ is involved by the heteromorphous matter, the rule is to remove, not a part, but the whole of it. Thus, in cancer of the mammary gland, the practice invariably is to extirpate the entire organ, no matter how small a portion may be implicated in the disease. Upon this point surgeons have long since been agreed. When the disease is seated in an extremity, especially the distal portion, the proper operation is amputation, not excision.

Fourthly. In removing a malignant tumour we should always endeavour to avoid the loss of blood. This is a good rule, I conceive, even when the patient is tolerably plethoric; but its observance is especially important in lean and fat subjects, the latter of whom, in particular, generally bear the loss of this fluid very badly. I deem it a matter of great moment to guard against hemorrhage in every operation of this kind, not so much on account of the immediate recovery of the patient as on account of the danger of relapse, which, I feel constrained to believe, is frequently very much increased by this accident.

Fifthly, and lastly. It is a matter of great consequence, in reference to the question of relapse, that the whole of the wound left by the operation should be healed by the first intention. For this purpose, the parts should always be approximated as nicely as possible, not only at their edges, but also over the surface of the wound, that there may be no cavities or pouches for the lodgement of matter, but that the restorative process may proceed in the best and most rapid manner at every point. The best dressings, I conceive,

are a light compress and a bandage, aided by adhesive strips, or collodion plaster. Sutures I consider as objectionable, because the track made by them occasionally serves as a point of departure to the new deposit, thereby promoting relapse. We have already dwelt upon the importance of saving a sufficient amount of integuments, that is, skin and cellular substance. Any deficiency of this kind must necessarily interfere with the adhesive process.

When a sufficiency of integument cannot be preserved, and the wound is obliged to heal by the granulating process, it is, I think, worthy of consideration whether the whole of the raw surface should not be effectually cauterized with the nitrate of silver, or with a stick of the Vienna paste, so as to form a superficial eschar. The practice certainly derives support from the beneficial effects which are said to follow the treatment of cancer by cauterization in the hands of the empirics, as well as in the hands of certain scientific practitioners, especially Canquoin.

Rhazes,* the Arabian, who flourished in the latter part of the ninth and the beginning of the tenth centuries, and who obtained the appellation of the *experienced*, recommends that all the carcinomatous structures should be retrenched with the greatest possible care; and he goes so far even as to enjoin that all enlarged veins, as well as a portion of the surrounding healthy tissues, should be removed at the same time. Then, as if to render assurance doubly sure, he cauterized the surface of the wound with the red iron, and immediately after used such means as were calculated to promote the speedy separation of the eschar. A similar practice was afterwards pursued by other surgeons, but with what effect has not transpired. I beg leave to recall the attention of the Association to the subject, in the hope that it may engage their consideration, with a view of determining whether this treatment, in some modified form, is not worthy of renewed trial. In a disease which has hitherto baffled all our attempts at cure, and which is so prone to return after operation, even when performed under the most favourable circumstances, every experiment having for its object the destruction of the new substance and the prevention of its recurrence ought to be regarded not only as justifiable, but highly proper.

Considerable diversity of opinion has existed among surgeons as to the time when the operation should be undertaken with the best prospect of ultimate success. The preponderance of professional senti-

* Continens, lib. xiii. cap. 2, fol. 256.

ment, however, has always been in favour of early interference, on the ground that the longer the disease is permitted to remain the greater, all other things being equal, will be the risk of contamination. The advocates of this measure, indeed, never countenance a resort to the knife when there is positive evidence that the disease has invaded the adjacent parts, or the system at large. Some, it is true, employ it with a view of prolonging life, or alleviating suffering, but never with the hope of effecting a radical cure. Among those who advocate the propriety and importance of delay, no one holds a more conspicuous rank than the late Mr. Pearson, of England. "The early extirpation of cancer," says this distinguished writer,* "confers no peculiar security against the return of the complaint; on the contrary, if the removal of the morbid part were equally complete in two patients, one of whom has been afflicted seven months, and the other seven years, with a cancer, I should esteem the latter patient in less danger of a relapse than the former. My reason for an opinion, which to some people may appear singular, is this, that when the breast, for example, is affected by the cancer, distant parts of that gland may become the seat of the morbid alteration about the same period. These several diseased portions may not advance with an equal celerity, but while one portion has acquired a considerable bulk, the other altered parts may be scarcely objects of attention. Under such circumstances the most obviously morbid parts may be removed, but the disease, being only in progression, no man can be certain, without removing the whole breast, that he has not left some diseased fibres. If, however, the disease shall continue without increasing during several years, one may in general conclude that its boundaries are more accurately defined." Similar sentiments have been expressed and advocated by several recent authorities.

Without stopping to dispute the accuracy of the opinions of the advocates for delay, I may state, as the result of my reading, that multiplied and reiterated experience has shown that, in the great majority of cases, if not in nearly all, the disease, if removed at a late stage, is only aggravated, and runs a more rapid course than it would do if left to itself. The testimony of Dr. Macfarlane, already alluded to, to say nothing of that of other surgeons, is conclusive upon this subject. This gentleman, who enjoyed ample opportunities of investigating the question, states that he could adduce a number

* Practical Observations on Cancerous Complaints, p. 31.

of instances in which patients, after having laboured under malignant disease for fifteen, and even twenty years, were cut off in a few months by operation. The complaint, under such circumstances, has a peculiar repullulating tendency, owing apparently to an increased functional activity of the capillary vessels, and also to an increased perversion of the nutritive process. The operation acts, figuratively speaking, like a blow or bruise, rousing the parts which had served to circumscribe the morbid growth from their slumber, and causing them to engage in the formation and deposition of new cancer-cells, with a force and rapidity previously unknown.

§ 8. TREATMENT AFTER OPERATION.

Another object to be attended to, after operation for the removal of the diseased structure, is the patient's diet. Of the propriety and importance of this injunction no one can entertain any doubt. The force of this remark will appear more evident when it is recollected that the progress of cancer has occasionally been stayed for months and even years by a regular and persistent system of starvation, barely allowing a sufficient quantity of food, and that of the most bland and unirritant character, to maintain the due play of the vital functions, without too great a reduction of the heart's action. Pouteau in France, Callisen in Denmark, and Fearon and Pearson in England, have particularly insisted upon this kind of diet, asserting that its employment is of more service in arresting the progress of cancer than any medicines that have ever been suggested for the purpose.

The kind of diet is, doubtless, a matter of no little moment. As a general rule, it may be stated, that meats, soups, and the coarser varieties of vegetables should be proscribed, on account of their heating and indigestible character. For the same reason, condiments, such as mustard and pepper, wine, spirits, and fermented liquors are to be eschewed. Among the more suitable articles may be mentioned stale bread, toast, and soda biscuit, hominy, rice, sweet and Irish potatoes, mush, macaroni, baked apples, figs, and ripe fruits. Not only should the food be perfectly simple and easy of digestion, but great care should be taken that it is always thoroughly masticated, and that the quantity at each meal is never so great as to crowd and oppress the stomach. As drinks, the best articles are water, lemonade, milk, and weak tea. Coffee, as being too stimulating, must be avoided.

Of late years, the attention of the profession has been called to the importance of an almost exclusively milk diet after an operation of this kind. The first mention which I find of this subject is by Antoine Deidier,* of Paris, as far back as a century and a quarter ago. In a case of carcinoma of the breast, he attributes the happy issue mainly to a diet of milk, prescribed after the operation. Some years ago, Dr. Leonard Pierce,† of Sutton, Massachusetts, published the particulars of a most interesting case of cancer of the mamma, showing the beneficial effects of this simple mode of living. The patient, his own mother, first discovered, in September, 1825, when in her sixty-second year, a tumour about the size of a chestnut in her right breast. A course of iodine, both external and internal, having failed to do any good, and the tumour continuing to increase, at the same time that it was attended with lancinating pains, excision was performed on the 29th of May, 1826. The wound healed without any difficulty, and the health remained as good as usual until the following winter, when another tumour appeared just beneath the cicatrice, accompanied with similar pains. This was removed, without any previous treatment, on the 5th of April, 1827. The wound showed but little disposition to heal, and in a few weeks two other tumours appeared in the neighbourhood of the former ones, and rapidly increasing soon ulcerated, and finally formed a hemispherical growth somewhat elevated above the skin, having an exceedingly jagged and angry aspect, bleeding on the slightest injury, and constantly discharging a thin, watery, irritating fluid. The pain in the part, as well as in the axilla, was excessively severe, and almost uninterrupted; there was also severe pain in the uterus, and everything, in short, seemed to indicate that the case would soon terminate in death.

On the 13th of September, 1827, soon after a severe attack of dysentery, which had reduced the patient very much, the knife was again used. At that time the tumour was larger than the breast, whose place it occupied, and it had for more than two months past bled from one to three ounces daily. A large portion of integument was removed along with the tumour, the base of which was nearly four inches in diameter; the pectoral muscle was perfectly sound; the wound soon entirely healed, partly by adhesion and partly by granulation; and the pains in the axilla and uterus entirely subsided.

It is proper to observe—for this is the chief motive for adducing

* Dissertation sur la Nature et la Guérison des Tumeurs, Paris, 1725.

† American Journal of the Medical Sciences, vol. viii. p. 49, 1831.

the case—that this lady, at the suggestion of the late Professor Smith, of New Haven, had subsisted for about two months before the last operation upon the most bland and simple diet, consisting exclusively of boiled green corn, seasoned with salt, and cooling drinks. She had also employed, three times a day, a pill composed of about three grains and a half of red oxide of iron, and one grain and a half of extract of conium. This prescription was laid aside after the operation, but she rigidly continued her corn diet, using the article fresh, or otherwise, according to the season of the year; sometimes she ate it in the form of hominy, with molasses, or she had it ground, and made into bread with water.

After having used this fare for about a year, she attempted the use of animal food, barely tasting it; but was obliged to abandon it at once, as it made her mouth and throat sore, and produced pains in the axilla, similar to those she had experienced in the cancer. The trial was several times renewed, at intervals of several months, but always with similar results. Exercise and mental emotions had the same effect, for a considerable time after the operation, as animal food, and she was obliged to avoid them. She occasionally ate fish sparingly. Potatoes agreed well with her. This diet was continued faithfully up to the time—how long afterwards, I cannot say—of the publication of the case, in March, 1831. All animal food, liquors, condiments, and heating drinks were studiously avoided. She never, however, deprived herself of the use of tea, but always took it cool, in small quantity. From the time she began to diet herself, the alvine discharges were thin and watery, and so continued as long as she confined herself to green corn; they were also hot and excoriating. It had the effect, moreover, of greatly diminishing her strength; but this afterwards improved very much when she commenced the use of ripe corn, bread, and other vegetables. Under this management, the health became as good as it had been before she was affected with cancer, which had not returned at the period above referred to, that is, about three years and a half from the time of the last operation.

Another most interesting and instructive case of malignant disease, exhibiting the beneficial effects of a restricted diet, occurred a few years ago in the person of an honoured member of this Association, and has been carefully reported by Dr. H. J. Bowditch, of Boston.* I allude to the case of the late Dr. Twitchell, of New

* Bost Med. and Surg. Journ. vol. xli. p. 494.

Hampshire. This gentleman, whose grandmother died of cancer of the breast, and whose sister had scirrhus of the pylorus, observed, when nearly sixty years of age, a small, hard tumour, free from pain, and not larger than a grain of mustard, at the inner angle of the right eye. It was imbedded in the substance of the skin, and seemed little inclined to increase. In 1843, it had attained the volume of a pea, and had a tendency to form scabs, the removal of which, under the use of Janning's eye-salve, usually exposed a small lobulated surface, covered with a little purulent fluid. In 1845, the greater portion of the tumour was excised by Dr. Hayward, of Boston. For a short time, the wound seemed to do well; but, finally, refusing to heal, the part was removed again two months afterwards, and touched with nitrate of silver. Meanwhile, however, it had become the seat of a deep-seated and rather severe pain, radiating towards the brow and cheek, and less transitory than before.

The tumour continued to augment slightly, and in the spring of 1847 it exhibited a decidedly malignant aspect. It was an ulcer, about the size of the top of the finger, with hard, ragged, and elevated edges, and an irritating discharge, which at night caused a gluing of the lids. Dr. Twitchell now determined to diet himself most rigidly, and for this purpose he used, three times daily, from four to six ounces of cream or rich milk, and the same quantity of white or brown bread. This course was faithfully persevered in with the effect of a complete cure until 1850, when the case was published. The pains in the part were lessened almost immediately; the purulent discharge also soon diminished; and it became apparent, in a few months, that the disease was not augmenting; the cure gradually progressed, and in August, 1848, the ulcerated mass was entirely gone, leaving the angle of the eye perfectly natural, excepting a minute white cicatrice, about a line in diameter. It is worthy of remark that this rigid course of dieting exerted no pernicious influence upon the patient's general health; but that, on the contrary, he presented, at the end of two years, when the cure was completed, the picture of a hale, robust man.

In a case of osteo-sarcoma of the scapula, in a man about forty years of age, a tumour, as large as a pint-bowl, was reduced, by this simple kind of diet, to such an extent that there was, at the end of two years, merely a trifling thickness of the skin. The disease, when first seen by Dr. Twitchell, whose patient the man was, looked so unpromising that this gentleman declined extirpation, being, in some degree, deterred by the result of a similar case, where the in-

dividual died, sometime after the operation, from carcinoma of some one of the internal organs.*

A case of cancer of the womb, in which the progress of the affection appears to have been retarded, if not arrested, for a long time, occurred, a number of years ago, in the practice of Dr. James McKeen, Professor of Obstetrics in the Medical School at Brunswick, Maine.† The woman, who was thirty-nine years of age, had been in the habit of living upon rich food and drinking strong coffee, and had suffered greatly from the disease referred to. Under the use of a simple farinaceous diet, and nothing but water for her drink, pursued for three years, she experienced so little pain and inconvenience that she thought herself at times cured. At the end of this period, at the solicitation of her friends, she lived for a few days upon strong food, such as she had not been accustomed to, and the consequence was a most severe attack of pain, followed by a foul discharge, and, in a few weeks, by her death. A *post-mortem* examination revealed the entire destruction of the neck of the uterus, with deep ulcers in the body of the organ, and apertures of communication with the bladder and rectum.

The late Professor McClellan,‡ of Philadelphia, refers to a case where a genuine carcinoma of the breast was kept in check for twenty years mainly by a course of rigid dieting. The tumour progressed rapidly for the first eight or ten months, until it had attained the size of a double fist, when it began to ulcerate near the centre, and to discharge ichorous and offensive matter. By detergent lotions, anodynes, and emollients, with great attention to cleanliness and the alvine evacuations, and a diet consisting almost exclusively of milk, bread, and vegetables, the disease was arrested, the pain alleviated, and the general health maintained in a good condition.

To prevent relapse after operation for malignant diseases, it has been suggested that the patient should be restricted almost exclusively to pure water. Ponteau,§ of Lyons, flattered himself that he had, by this treatment, effected several radical cures. His practice consisted in giving his patients each from five to six pints of ice-water in the twenty-four hours. At the end of three days, says he, the appetite usually ceases, and the individual is hardly incommoded by the privation, living often fifty and even sixty days with-

* Boston Med. and Surg. Journ. vol. xli. p. 498, 1849.

† Mussey's Report, Trans. Amer. Med. Association, vol. iii. p. 330, 1850.

‡ Principles and Practice of Surgery, p. 400, Phila. 1848.

§ Œuvres Posthumes, t. 1, p. 96, Paris, 1783.

out a particle of food of any kind. Should the breath become offensive and the tongue coated, he recommends the exhibition of from two to three drachms of magnesia, in divided doses, in the morning. At the end of two months, this rigid abstinence is abandoned, and the patient gradually resumes his former mode of living, beginning with the yolk of an egg, beaten up in two tumblersful of cold water, then with creams and soups, and finally with solid food. Ponteau thinks that the use of ice-water is more in harmony with nature than ordinary water; that it is, in short, a better tonic, and that it is better calculated, so to speak, to deceive the appetite, thereby rendering this feeling more endurable.

Dr. William Lambe,* an English physician, embracing the views of Ponteau, recommends the substitution of distilled for ice-water, as a curative agent in this complaint; but it does not appear that he obtained any particular benefit from its employment. The *water practice*, as it may be termed, of these writers, has never become popular with the profession, and I have no facts to offer in support of its utility.

Valsalva, and, subsequently, Fearon, a surgeon of London, recommended the repeated abstraction of blood by leeches, as a means of curing cancer, and a similar mode of treatment has occasionally been pursued to prevent relapse after operation. It is difficult to perceive the *modus operandi* of such a remedy in such a case, or the principle upon which it could afford relief. Fearon, believing that all cancerous affections are of an inflammatory nature, employed it as an ordinary antiphlogistic.

It is hardly necessary, in a paper of this kind, to speak of the various internal remedies that have been, from time to time, proposed for the cure of cancer, and for the prevention of its relapse after extirpation. Suffice it to say that none of them have fulfilled the promises and hopes that practitioners have been led to expect from their exhibition, and that there is not, in all the long and variegated catalogue, a solitary one that can, in anywise or degree, be viewed in the light of a specific, or as a neutralizer of the morbid poison concerned in the production of malignant disease, in any of its diversified forms and characters. Whatever benefit may attend their employment flows solely and entirely from the good effects which they exert upon the digestive organs, and, through them, upon

* Report on the Effects of a Peculiar Regimen on Scirrhous Tumours and Cancerous Ulcers, London, 1809.

the system at large, or, in other words, upon both solids and fluids. If there be any remedy calculated to prevent the formation of the cancer-cell, or to arrest its progress after it has been developed, we are ignorant of it. Human science and human skill may destroy, rudely and mechanically, a malignant tumour in an accessible part of the body; but they have not yet taught us, if, indeed, they ever can teach us, how to change and modify those circumstances which precede and attend its creation under the plastic powers of the capillary vessels of the affected structures. Possibly, the joint agency of animal chemistry, the microscope, and therapeutics, may some day enlighten us upon a subject which has hitherto eluded our investigations, conducted though they have been through a series of ages, as if to admonish us of the imperfections of our art, the imbecility of our nature, and the vanity of our inquiries.

Nearly twenty years ago, a French surgeon, M. Martinet (de la Creuse),* thought that he had discovered a method by which, in many cases, if not in all, a return of the disease after ablation might be effectually prevented. It consists in filling up the gap left by the removal of the morbid mass with a flap of sound skin, taken from the neighbourhood, and carefully adapted, by means of stitches and other means, to the raw edges of the wound, to insure their speedy reunion. The object of the procedure is to change the functions of the parts in such a manner as to restore their healthy nutrition, thereby destroying the tendency to cancerous action. When M. Martinet published his paper on the subject, in 1834, he had performed this species of anaplasty in four instances, and in every one with the most gratifying success. One of his patients was seen six years after the operation in perfect health; and two others remained without relapse at the end of three years. In the other case, death occurred at the expiration of two years and a half, in consequence of an affection unconnected with cancer. The operation has been performed by Sedillot,† Jobert de Lambelle, Dieffenbach, Zeis, Baroni, Rizzoli, and other surgeons; but with results so unsatisfactory as to hold out no inducements for repeating it. Zeis‡ has formed a very unfavourable estimate of the practice, and the experience of Baroni and Rizzoli,§ of Italy, proves that it does not exert the slightest influence upon the reproduction of the disease.

* Gaz. Méd. de Paris, No. 42, 1834.

† Annales de la Chirurgie, t. 15, p. 105, Paris, 1845.

‡ Handbuch der Plastich. Chirurgie, s. 367.

§ Bulletino delle Scienze Mediche, serie ii. vol. 7, p. 237.

My experience with this operation is quite limited, having performed it only twice. In both cases the patient had epithelial cancer of the lower eyelid, and in both the disease returned after an interval of several months. In another case, of which I have the particulars, the patient, a gentleman, aged about fifty, had cancer of the lip, which, after having been removed several times, was finally treated by anaplasty. For awhile, the transplanted parts retained their healthy character, but at the end of a few months they gradually became hard and rigid, and exhibited all the evidences of cancerous disease. This patient has just died from the effects of his disease.

I find that many of the older surgeons, and, indeed, quite a number also of the modern, strongly insist upon the establishment of an *issue*, seton, or perpetual blister, as means of preventing a return of the disease after extirpation. In the time of Baron Boyer and Benjamin Bell, the practice seems to have been in very common vogue. Monteggia, of Milan, lays much stress upon it, as late as 1815.* He says that Desault, who neglected attention to this subject, and who permitted his patients to take care of their health as best they could, lost nearly every one from speedy relapse. Professor Chelius, of Heidelberg, is one of the latest writers who insist upon the importance of this mode of treatment. M. Rayer also thinks well of it, and fancies that reproduction is less frequent after operation, especially in cutaneous cancer, when an issue is made in each corresponding extremity.

Of the value of this practice, which consists in maintaining a free discharge in the neighbourhood of the original disease for several years, or even during the remainder of the patient's life, we have no positive information. Those who seem to have the greatest confidence in its efficacy have failed to adduce any facts in support of it. Their ideas respecting it are evidently of a vague and conjectural character. It is difficult to conceive how such an agent could prevent the formation of cancer-cells, and yet it might exercise such an influence. I submit it to the members of the Association, whether it would not be well to revive this mode of treatment, in connection with a well-regulated diet and strict attention to the bowels and secretions, after operation? The true value of it, at all events, can be determined only by future trials.

* Institutioni Chirurgiche, vol. vii. p. 213, Milano, 1815.

PART II. GENERAL OBSERVATIONS ON CANCER, IN RELATION TO THE RESULTS OF SURGICAL OPERATIONS.

It will be the object of the Committee to arrange under this head such facts and observations as have been contributed by different surgeons, and gleaned from American and European writers. The information obtained from the two latter sources is comparatively meagre; but this circumstance is to be the less regretted, because ample opportunity will be afforded, in the section on carcinoma of the mammary gland, for an exhibition of the views and recommendations, not only of our own surgeons, but of the surgeons of different countries, in respect to the propriety or impropriety, utility or inutility of operation for the relief and cure of malignant diseases.

The most valuable information that has been furnished to the Committee, in relation to this department of the subject, is from the pen of Dr. J. M. Warren, of Boston, and from that of Professor Hamilton, of Buffalo. The paper of the former of these distinguished gentlemen, comprises: first, a history of twenty cases of cancer, as it appeared in different organs of the body; secondly, a general summary of the operations for cancer at the Massachusetts General Hospital, from 1822 to 1852; and, thirdly, a record of operations for cancer in the hospital and private practice of the author. The table of Professor Hamilton gives the particulars of fifty-nine cases of the disease, and has evidently been drawn up with much care. Both articles are worthy of attentive consideration and reflection.

§ 1. FACTS AND OBSERVATIONS CONTRIBUTED BY J. MASON WARREN, M.D., OF BOSTON.

The attempt to arrive at the results of surgical operations in malignant diseases is attended with many difficulties. Most patients thus afflicted come from a distance, to present themselves to a surgeon in the city, either in private or hospital practice; the operation is performed; the patient disappears, and is often completely lost sight of. This is true of a large majority of the cases which occur. The important question, therefore, seems to resolve itself into this—

are there any cases known of patients operated on for cancer, who have remained well after the lapse of a number of years? If any such can be produced, it is certainly an important element in encouraging us to attack malignant growths by the knife.

A number of the cases, hereafter to be given, seem to lead to the conclusion that a cure by the knife is sometimes to be expected; others show that a removal of the tumour may be resorted to for the purpose of deferring the evil day; and, finally, a third class exhibit the operation simply as a palliative to smooth the pathway to the grave.

The accounts contained in the following pages may, for the sake of arrangement, be classified under these heads:—

1. Some operations for the removal of cancer, from which the patient still survives.

2. Others, in which the disease having been removed, has returned after a number of years, and again been subjected to the knife with relief.

3. Others, which are interesting from their peculiarity.

4. The statistics of cancer from the records of the Massachusetts General Hospital. A table of these, from the opening of the Institution to 1850, was prepared under the direction of Dr. Parkman, some years since, with great care, and kindly lent me by him. This has been completed under my own direction by Mr. Sawyer, the present surgical house-pupil. A general summary of these has been introduced in the present article.

5. To these have been added some cases of my own public and private practice within the last few years, chiefly of larger operations, no record having been preserved of many upon the lips and skin. My earlier notes are also not sufficiently detailed to afford any satisfactory results; and the patients, with the exception of the cases to be given, are mostly lost sight of.

The hospital statistics simply show the part most affected by cancer, and the immediate result, whether fatal or not.

Case I. *Scirrhoma of the Left Breast. Excision. No Return at the End of Twelve Years.*—1840. Mrs. V., 50 years old, the mother of three children, has always enjoyed good health until the occurrence of the present disease. Her complexion and hair are both light. Early in life, she had a milk abscess in the left breast, which has left a slight induration. She knows of no hereditary disposition to cancer.

About two years since, she began to have an uneasiness in the left breast, and soon discovered a slight hardness in the glandular structure. This has gradually increased till it now involves the whole breast; the nipple is retracted. She suffers much pain, and is very desirous of an operation. The glands in the axilla seem not to be affected. The breast itself is the seat of a large hard tumour, movable on the subjacent structures; the skin at different points is slightly retracted and adherent to the tumour beneath.

The disease was removed by two semilunar incisions, embracing the nipple and a portion of the adherent skin; the breast being large, required quite an extensive dissection. Dr. J. C. Warren, Dr. Cantaro, and other gentlemen assisted at the operation. The wound was brought together by sutures and adhesive straps, secured by compresses and a bandage. The subsequent prostration was considerable, but the recovery progressed well.

February, 1852. I have heard from this lady, who is now in England. She is in the enjoyment of good health, and at present, so far as I can ascertain, there are no signs of a recurrence of the disease.

Case II. *Encephaloid Tumour of the Breast. Removal. No Return at the End of Six Years.*—January, 1846. Mrs. G., of South Boston, 69 years of age, a small, thin woman, and the mother of a number of children, has always had good health. So far as she knows there is no hereditary tendency to cancerous disease.

About eighteen months since a tumour appeared in the right breast, and grew with great rapidity; so as to involve the whole breast in a large tumour, of a pyramidal shape, quite tense and elastic, the summit occupied by a bright red spot, apparently on the point of ulceration. The tumour was quite movable on the subjacent parts.

The patient, having great dread of an ulcerated cancer, was very desirous to have an operation performed, and as the tumour was on the point of breaking through its bounds, when severe, if not dangerous hemorrhage would undoubtedly ensue, I consented. The friends, however, were first made aware how little was to be expected from the removal of a disease which had proceeded to such an advanced stage, and also of the fact that on the right arm there was a small, movable, melanotic tumour, the size of a hazel-nut.

The tumour was removed in the ordinary way, with as much rapidity as possible. On account of the great vascularity of the

parts, every incision was followed by a violent gush of blood, leaving the patient seriously faint at its termination. The edges of the wound were approximated as nearly as the form would admit of, and moderate compression made by a roller around the chest.

On examination, the tumour was found to be a specimen of pure encephaloid, in weight about three pounds. It was shown at one of the meetings of the Society for Medical Improvement, and no doubt entertained as to its character.

The recovery of this lady was good. From all appearances at the time of the operation, her chance of living without a removal of the disease could hardly have been estimated beyond two or three months; but in 1848, I saw her in good health, and am informed at this date (Feb. 1852) that she is still living, and has never experienced any inconvenience from the operation or relapse of the disease.

Case III. *Excision of the Horizontal Part of the Lower Jaw for Malignant Disease.*—May 13. The patient was a healthy boy, fifteen years old, with no hereditary tendency to malignant disease, so far as could be ascertained. Two years and a half since, a small red fungous tumour made its appearance between the middle incisor teeth of the lower jaw. This tumour gradually increased, separating the teeth, and finally involved the whole depth of the bone. At the time of the operation the lip was much pressed outwards, and the cavity of the mouth so encroached upon as materially to embarrass the speech and prevent mastication.

The disease was removed by making an incision through the lip in the median line, and extending it as far as the os hyoides. The soft parts being dissected from the bone, this was partly sawed through by means of a metacarpal saw, the second bicuspid tooth on either side being removed. The incision through the bone was completed with cutting forceps.

Before separating the attachments between the jaw and the tongue, a ligature was passed through the mucous membrane at the base of that organ, in order to prevent retraction, an accident that Dr. W. had seen happen in an operation similar to the present, the patient being saved from suffocation by the surgeon thrusting his finger down the throat, hooking up the tongue, and securing it by a ligature.

In the present instance there was no disposition in the tongue to retract, but, for the sake of precaution, the ligature was passed

through the wound, and formed one of the sutures which confined the edges of the lip when they were approximated.

The portions of the jaw removed show the whole bony structure expanded and enlarged. On the alveolar edge one bicuspid tooth remained on each side. On the left side two incisors. The right incisor teeth had disappeared. The right cuspidatus was found deeply buried in the jaw, lying diagonally across the root of the bicuspid, never having come to the surface. From the expansion of the jaw by the disease, nearly two inches existed between the bicuspid tooth of the right side and the incisor of the left.

A small portion of the expanded shell of the bone being cut away from the internal face of the jaw, exposed a fungoid mass filling the interior. This, on being submitted to microscopic examination, presented well-marked cancer-cells.

The disease was limited by the bone, the soft parts in the vicinity exhibiting no marks of disease.—*Records Bost. Soc. Med. Improvement.*

Case IV. *Scirrhus of the Left Breast. Excision. No Return of the Disease.*—August 19, 1848. This patient was an Irish widow, 40 years of age. About nine months previous to her admission to the Massachusetts General Hospital, she suddenly experienced a sharp darting pain in the left breast, near the nipple, and on applying her hand detected a small hard lump, the size of a pea, which gradually increased to that of a hen's egg. "Sharp stinging pains have troubled her for the last two months, since the nipple began to be retracted. She thinks she has nursed her children more from this breast than the other."

The breast was removed upon the day of her admission, and in rather more than six weeks she was discharged well.

March 16, 1852. This patient, who is a large powerful person, was seen by me to-day. She is now, and has been since her recovery from the effects of the operation, in the enjoyment of perfect health. The scar is about four inches long, quite soft, and healthy.

Case V. *Encephaloid Tumour in the Cheek. Removal. Recovery.*—A young gentleman from Halifax, aged 16 years, came under my care in January, for a tumour situated in the substance of the right cheek. One of a similar nature had been removed from the same situation two years before, but had speedily reappeared. When I saw this patient, the whole right side of his face looked larger than

the other, the veins were everywhere distended, and, at first sight, a malignant disease of the antrum would have been suspected.

On careful examination, I discovered a lobulated tumour deeply seated in the substance of the cheek, just below the zygomatic arch, and apparently running up under that bone. It was quite hard, and moderately movable. A large vascular polypus also occupied the right nostril, and entirely obstructed the breathing through that side.

In consultation with Dr. J. C. Warren, it was determined to remove the tumour, which was done on January 28, in the presence of a number of medical gentlemen. Ether was exhibited by Dr. Morton, and in four minutes the patient was quite insensible. A transverse incision was then made along the lower edge of the zygoma, through the skin and muscular substance, which exposed an erectile vascular tissue, entirely enveloping the tumour, and intimately connected with the surrounding parts. In dividing this, in order to arrive at the body of the tumour, a hemorrhage commenced, which greatly obscured the dissection, and it was only by compressing the carotid artery that the operation could be continued.

The tumour was now discovered extending up under the zygomatic arch, but only attached in that direction by a loose cellular tissue; behind, it dipped down in the direction of the spheno-maxillary fissure. It was finally detached from these different connections, after a long dissection. The operation was suspended from time to time, in order to allow the repetition of the ether, which was thus three times repeated at the request of the patient, and after the first time with an almost instantaneous effect. He said subsequently that he had experienced no pain, and that his impressions were of an agreeable character. His call for the ether, he said, was partly for the pleasure of taking it, and not entirely on account of the relief it afforded him from suffering.

In consequence of the great hemorrhage from every part of the wound, it was finally found necessary to stop the bleeding by compression with sponges. No subsequent bleeding took place, and the patient recovered without any bad symptoms. One or two weeks elapsed, however, before the sponges could be extricated from the wound, so firmly were they embraced by the granulations, and at length removal was accomplished only by tearing them away piecemeal. The disease was of the encephaloid character, and entirely surrounded by erectile tissue, the division of which gave rise to the hemorrhage. With the exception of the actual cautery, the use of the sponges seemed to me the only means of stopping the flow of

blood, and from the great difficulty here encountered in the removal of these from the wound, I think that in a similar case I should give the preference to the former.—Taken from the *Boston Medical and Surgical Journal*, 1847.

May, 1852. This patient I have seen within a month, and there had at that time been no recurrence of the tumour.

Case VI. *Scirrhoma of the Parotid. Removal. Recovery.*—A large, powerful, plethoric man, 34 years of age, consulted me for a tumour in the right parotid gland. A tumour had been removed from the same spot twenty years ago, which shortly afterwards reappeared in the form of a small, hard tubercle under the ear. For fifteen years, it remained stationary, and then began to increase. It is now about the size of a hen's egg, of a bluish colour, lobulated, and having a hard base surrounded by small cysts. The lobe of the ear is pushed upward by the tumour, which extends inward and apparently involves the lower half of the parotid gland.

As the patient was very desirous of an operation, I determined on its removal. It was a question whether it would not be advisable to apply first a ligature to the carotid. On examination, by a number of medical gentlemen, it was thought possible to remove it without having recourse to this means. Drs. J. C. Warren, George Parkman, S. Parkman, Briggs, and Mr. Slade, were present at the operation.

Ether was given him by Dr. Morton, who was desirous of seeing its effects on so powerful a patient. The pulse, before its exhibition, was 90. On commencing the inhalation, the eyes and face were much injected with blood, but as it was continued he gradually became pale, and in about the ordinary time was quite insensible. The tumour required a very slow and careful dissection; the base of it was found to have undergone osseous degeneration, and pressed upon the facial nerve as it crossed the styloid process. This was the cause of a paralysis of the side of the face, which was gradually taking place, a fact I omitted to state in the history of the case.

Towards the middle of the operation, the patient began to make strong muscular exertions, indicative of returning consciousness, and which somewhat interfered with the dissection. As soon as he complained of pain, a second dose of ether was administered, which took effect speedily, and prevented him from suffering for the remainder of the time. The operation occupied about half an hour; and, although it was severe, not the slightest constitutional trouble fol-

lowed. In the course of a week, he was able to return home to Maine.—Taken from the same *Work*.

March, 1852. This patient has been heard from not long since as in good condition.

These two last-recorded cases were among the earliest operations performed under the influence of ether.

Case VII. *Cancer of the Eyelid.*—April 25, 1839. A healthy, robust-looking sailor, 71 years old, noticed a small pimple at the inner corner of the left orbit, about four years ago. To this, others succeeded, which coalesced into one tumour, with a warty appearance on its surface, when he picked off the scab. There have been occasionally slight pains in it. At the present date, there is a small irregular wart-like tumour on the nasal aspect of the left orbit, covered by a thin dark-brown scab.

On April 28, patient being well etherized, the tumour, with a sufficient portion of the healthy surrounding structures, was excised, and the surface touched with potassa fusa. Two small arteries were tied, and the parts brought together by four sutures. Collodion was applied, forming a thin, delicate scab over the wound. In about three weeks he was discharged well, and remains so at this present time, March, 1852.

Case VIII. *Scirrhus of the Breast.*—May, 1849. Mrs. M., 45 years of age, applied to me for advice on account of a large hard tumour of the breast, slightly adherent to the skin, and which had appeared between ten and twelve years previously. The patient was a powerful, fine-looking woman, the mother of a number of children, and until the appearance of the tumour had always enjoyed perfect health.

A small movable mass was first discovered implanted in the glandular part of the breast, and had gradually enlarged until the whole of that organ had been involved. The disease caused her much pain and inconvenience, though it had no decidedly bad influence upon her general health. She formerly had a milk abscess in this breast.

Under chloric ether, the whole breast was removed, a sufficient portion of the integuments being saved to allow the edges of the wound to be approximated.

The disease was undoubted scirrhus.

A day or two after the operation, a sudden hemorrhage took place from the wound, but it was checked before I arrived by the simple

application of compresses wet with cold water over the dressings. Some suppuration ensued, union by the first intention being prevented by the coagula which had collected. In the course of three or four weeks, she was sufficiently well to return home, a long distance from Boston, the wound being then almost healed.

During the past week (March 16, 1852), having had occasion to operate for cancer of the breast, on a lady, a connection of the patient, I was informed that at the present time she enjoys good health, and has had no return of disease in the part operated on.

Case IX. *Carcinomatous Tumour of Upper Jaw.*—April 3, 1850. A lady, 65 years of age, had always enjoyed good health until about six months since. At this period, she observed a small tumour between the middle incisor teeth of the upper jaw, which gradually loosened and fell out, shortly followed by the lateral incisors.

The tumour was, at the time of her appearance, of the size of a pigeon's egg, rather elastic, crackling, as if having a delicate shell of bone. The alveolar process was implicated in the disease, which impinged on the nasal cavities.

The patient being brought under the influence of ether, and the mouth secured in such a position, by means of wedges between the teeth, that the jaw could be easily worked upon, the tumour was removed by the knife and a powerful cutting-forceps. The lower part of the left maxillary sinus was exposed by the operation. The bleeding was profuse, but was checked without having recourse to the actual cautery, which had been kept in readiness, in case of necessity.

This patient had a good recovery, and is now (March, 1852) in the enjoyment of good health. The disease removed consisted of a shell of bone, containing in the centre a soft granular matter having the appearance of colloid.

Case X. *Scirrhoma of the Left Breast. Removal. Reappearance in the Right Breast after twenty years. Removal. No Return since.*—Mrs. B., 50 years of age, of clear complexion, dark hair, considerable *embonpoint*, good colour, and having every appearance of fine health, consulted me in September, 1851, for a tumour of the right breast. The swelling had presented itself nine years previous, without any assignable cause; but it was not until the last year that it had given much trouble.

On examination, there could be discovered a hard lump, occupying the central portion of the breast, quite firm, and having all the marks of scirrhus. The axillary glands were not enlarged.

The patient informed me that, twenty years previous, Dr. John C. Warren removed a scirrhous tumour from the left breast, which had been of slow growth and was the result of a blow.

The mammary gland and nipple were removed in the subsequent operation (1851), with the assistance of Drs. Minot and Abbott. The edges of the wound were approximated by means of two or three sutures and adhesive straps. At the first dressing, on the third day, the skin was found to have entirely healed by the first intention. On the fifth day, however, a small, painful spot was complained of by the patient just above the wound, and at this point a collection formed, to which it was necessary to give exit a day or two after. The extremities of the wound also gave way, and discharged a bloody serum. The whole wound then healed regularly and kindly, and the patient is now (Feb. 1852) in the enjoyment of perfect health.

This case is interesting from the fact of a removal of a scirrhous tumour from the breast, and no return of the disease for eleven years subsequently; a second tumour then appearing in the opposite breast, and nine years elapsing before it was sufficiently troublesome to require extirpation. Her aspect was that of a fine, handsome woman, and wholly unlike that of the victim of a malignant disease.

In regard to the suppuration which took place in the wound, I would remark that I have almost invariably observed that where union by the first intention is attempted, and succeeds, in persons of much adipose substance, the wound sooner or later gives way again from the suppuration in the subcutaneous tissue. In thin persons, a sound union may be expected; in fat subjects, hardly ever, according to my experience.

Case XI. *Malignant Tumour arising from Periosteum of Left Tibia. Removal of the Limb. Health good at the end of fifteen months.*—Dec. 1850. A mechanic, 52 years of age, with general good health, and no hereditary tendency to cancer, consulted me, and stated that, about twenty-three years ago, he struck a heavy iron hook against the middle of the left shin-bone, in front. A swelling very soon appeared, much harder than usual, not discoloured, and very tender, which soon increased to the size of a small egg. And thus it remained for twenty years.

In the summer of 1847, the tumour was accidentally struck by a hammer. At the time, the pain was excruciating, but subsided sufficiently in the course of a day to allow him to attend to his business, recurring occasionally for two or three months, mostly in the night. At the expiration of this period, he perceived the tumour to have gradually enlarged, having in eighteen months attained the size of an orange, with a proportionate increase of pain. It was very red; at the apex of a bright crimson, and the integument over it very thin and tense. The limb below was swollen and œdematous. Granulations, bleeding at every touch, arose from a slight abrasion. Such was its condition when the tumour and portions of the tibia, to which it was adherent, were removed by a surgeon.

In three months the wound healed soundly, and thus remained about a year, when there appeared, on the outside of the cicatrix, a swelling of the size of a cent, which followed precisely the course of the preceding tumour. At the time of removal of the limb, it had assumed the following appearance:—

"Six inches above the malleolus, on the outer aspect of the left tibia, and apparently adherent to it, was a lobulated tumour, eight inches and three quarters in circumference, two inches in height. It was somewhat constricted at its base by the integument, through which it had extruded, as if forced up from beneath. To the inside of its base was a hard tumour, in size and shape like a large almond." The apex of the large tumour had a sloughing aspect; the integument at the base, which was the seat of the greatest tenderness, was reddened.

The limb was amputated by the circular method, and upon a section of the tibia the tumour was found to have been between the periosteum and the bone. It was firm, white, and fibrous, of the size of a walnut, and from one side sprung the fungous growth described above.

Case XII. *Tumour of the Right Arm, requiring Amputation at the Shoulder-joint.*—1851. A man, tall and thin, about 30 years of age, had always enjoyed good health, until April, 1850, when he had a bloody discharge from the urethra, without pain. In June following, there appeared under the skin of the arm, near the insertion of the deltoid muscle, a small hard lump, which ultimately encircled the arm, raising up the brachial vessels and nerves. The motions of the arm were not much affected, but for a short time previous to his application the tumour had rapidly increased in size and in pain.

On Feb. 15, 1851, the patient being etherized, an incision was made into the tumour, when it was unanimously pronounced by the medical gentlemen present to be a carcinomatous growth. The removal of the arm at the shoulder-joint, as had been previously determined upon, was therefore performed by an anterior and posterior flap. But little blood was lost, in consequence of the scientific compression of the subclavian artery by Dr. Williams.

"The tumour, on dissection, presented a lardaceous appearance, and, under the microscope, showed much fibrous tissue, in which, after much investigation, cancer-cells were distinguished."

This patient recovered rapidly, and at the present date, February, 1852, is, I believe, in good health.

Case XIII. *Scirrhus of the Right Breast. Excision. Subsequent Tumour in the Thigh, of a questionable character.*—September, 1847. Mrs. J. W., forty-five years of age; quite tall, thin, skin somewhat dry and sallow, chest flat, with health generally delicate, the mother of two children, and no hereditary tendency to cancer, had a milk abscess in both breasts, leaving an induration there. Two years since, a tumour made its appearance in the inner part of right breast, which gradually became attached to the nipple, causing a retraction of that organ. At the time I saw the patient, the tumour was the size of a hen's egg, or perhaps larger; irregular, moderately movable, very hard. It gave her much pain, and she was extremely desirous of having it removed.

From the delicate appearance of this patient, and the irregular formation of the tumour, I had great fears as to the result of the operation, and so stated to her friends. As the inconvenience from it was so great, they determined to have the operation performed, even if it was done merely for the palliative effect. I therefore went into the country, some forty miles from Boston, for this purpose. The whole gland, with the nipple, and a portion of skin, was removed, and the edges of the wound approximated with adhesive straps. To my surprise and pleasure, I heard from this patient, some three years after, through her physician, who said that the wound had healed, and that she enjoyed good health. The sister of this patient, who was present at the operation, had a large tumour of the breast removed ten years before, which was of very rapid growth, and possessed all the appearance, according to her description, of a fungoid disease.

To-day, March 16, 1852, this lady applied to me on account of

a hard movable tumour in the left thigh, placed over the course of the femoral vessels, an inch or more from Poupart's ligament. I asked permission to examine her breast. The cicatrix, four or five inches in length, was perfectly healthy, as were the skin and glands in the neighbourhood. Her health was good, and she had been once brought to bed of a living male child since the operation.

As to the nature of the tumour in the thigh, which is without pain, and as yet of but slight inconvenience to her, time only can determine. Her appearance is quite healthy, and presented a striking contrast to what it was previous to the removal of the cancer.

May 4. I removed the above tumour, and the patient is now (1853) well, and has lately been confined with a healthy child.

Case XIV. *Cancer of the Breast. Removal. Reappearance at the end of ten years. Excision.*—1851. Mrs. ——, sixty-four years old, applied to me, in 1841, for a cancer of the right breast. At this time she was a widow, and her last child was an adult, after the weaning of which the milk had remained in her breast for three years. The whole mammary gland had been invaded by scirrhous disease, and the skin covering it eaten off by the applications of a cancer doctor, who had left her in this condition after informing her that she was cured.

I removed the whole breast, and the wound healed well by the second intention.

In January, 1851, I was requested to visit this patient out of town, as another tumour had made its appearance near the axilla, and on the same side of the chest with the previous operation. I found the lady engaged in her household affairs, quite lively, and not at all disposed to give way on account of the reappearance of the disease.

Since my previous attendance she had again entered the matrimonial state. She had experienced no inconvenience at the seat of her old disease until the last year, when a small, hard lump had sprung up on the edge of the pectoral muscle, which was now adherent to the skin and to the muscle.

With the assistance of Dr. B. Brown, who accompanied me for the purpose, I removed the disease, Drs. Gould and Sullivan, physicians of the place, being present.

The husband of this lady informed me in January, 1852, that she enjoyed perfect health, and had no return of the local affection. He

also informed me that, previous to the last operation, she had been in the habit of remaining constipated for five or six days, and had sometimes gone sixteen days without an alvine evacuation, the food being rejected from the stomach once or twice in the twenty-four hours. During the past year, by careful attention to diet and regimen, assisted by some saline purgatives, she has been able entirely to overcome this torpidity of the digestive function.

Case XV. *Scirrhoma of the Breast in a woman seventy-six years old. Removal. Return of the Disease in the Cicatrix four years subsequently. Again removed. Recovery.*—1847. Mrs. F——, aged seventy-six years, of florid complexion, quite fleshy, by occupation a nurse, entered the Massachusetts General Hospital in October, 1847, for a scirrhous tumour of the right breast. When quite a child, she said that a "boil" formed near the nipple of this breast and discharged itself, leaving a small indurated spot under the skin. Within the last twenty years, the present disease had been gradually increasing, having commenced in the above induration, and extending over the whole breast. The nipple had retracted, and a bloody serum issued from it. The lancinating pains were so severe as to induce her application at the hospital for relief.

I removed the whole breast, which was a large one, the incision being over nine inches in length, and she had a good recovery, being discharged well in about a month. The disease was genuine scirrhus.

In December, 1851, I was requested to see this patient by Dr. Francis Minot, at the Hospital for Aged Females, under his charge. She had perceived no return of the disease, and had been quite well until within a year, when a small indurated spot appeared in the centre of the cicatrix made by the former operation. I agreed with Dr. Minot in the propriety of removing this disease at once, and, the patient consenting, it was done by him a few days after. I have since understood that the wound healed well.

Case XVI. *Cancer from a Blow, with Hereditary Predisposition.*—March, 1851. Mrs. R., sixty years of age, lost her husband a few months since. She has generally been healthy; her father lived to a good age; her mother had a cancer of the breast at the time of Mrs. R.'s birth, and afterwards died of cancer of the uterus. One of her sisters had cancer of the breast.

About six months since, she received a violent blow on the arm

and chest, occasioning inability to use the arm afterwards, the shoulder-joint being quite stiff, and almost immovable. Shortly after the reception of the blow she began to have pain in the right breast, and a small, hard tumour made its appearance there, which slowly increased, and became the seat of a burning and shooting pain.

On examination, I found a tumour the size of an egg, having all the physical characters of scirrhus, to occupy the axillary side of the nipple, the skin at this point being drawn in and attached to it. The stiffness of the shoulder-joint rendered it impossible to inspect the axilla satisfactorily. Her health had been much impaired by the long confinement incident to the injury of the arm, and by a chronic bronchial irritation, but the suffering from the disease was such that she was very anxious to have it removed.

Previous to the operation, this lady was placed fully under the influence of chloric ether. The arm then being firmly seized, the adhesions at the shoulder-joint were broken up, so as to impart quite a free motion to the limb; the injury having apparently been a fracture of the socket, and possibly of the head of the humerus. The axilla by this manipulation being fully exposed, it was found that the lymphatic glands in its border were enlarged, but the disease had not extended into the axillary fossa to any depth. The entire breast and the diseased glands were carefully dissected out, so that no perceptible disease was left.

The morbid tissue, examined microscopically and otherwise, had the distinct marks of scirrhus.

The wound healed well by the first intention, and the patient recovered a very fair use of the arm. Since the operation she has removed from the city, and when last heard from her health was failing, although there was no recurrence of the cancer.

This case presents a remarkable instance of hereditary predisposition, brought into activity at a late period of life, from an accidental cause.

Case XVII. *Testicle retained in the Groin. Removal. Subsequent Death of the Patient from Internal Disease, apparently malignant.*—Feb. 1851. The patient was a gentleman, 35 years of age. The right testicle had never descended into the scrotum, but had been retained in the inguinal canal. For many years this was no inconvenience to him, but lately it had been quite tender, giving him extreme pain on the slightest pressure, which extended upwards into

the abdomen and down the thigh. As no treatment gave relief, I was requested to perform the operation of removal.

The patient was quite delicate in health and nervous, but with no apparent malignant disease beyond what has been stated. After etherization with chloric ether, the dissection was conducted with the utmost caution, for fear of infringing on the abdominal cavity. The testicle was removed with the tunica vaginalis, which closely embraced and in some places strongly adhered to it.

On cutting into the testicle after its removal, the structure of the organ was found to be completely disorganized; the upper part of its body presenting the aspect of an unripe apple; in the lower, was a cyst filled with a jelly-like material. Under the microscope, some nucleated cells were seen.

This gentleman recovered from the operation, but died suddenly a year afterwards, having suffered for some time previously with obscure symptoms of internal disease.

In two other cases of retention of the testicle in the groin, which I have witnessed, the organ was invaded by encephaloid disease.

Case XVIII. *Encephaloid Tumour of the Forearm. Amputation. Return in the Chest a year afterwards.*—A child was brought me in 18—, about four years old, having a large elastic tumour occupying nearly two-thirds of the forearm. The tumour was large above, and gradually tapering towards the wrist-joint. It was covered with large veins, and had a most picturesque appearance. The child seemed to be in the bloom of health; it was quite fat, and the cheeks possessed a most beautiful glow. The tumour was congenital, but had increased slowly since birth. The parents were from the country, healthy, and had other children living.

I pronounced the disease at once to be malignant, and advised immediate amputation, which was agreed to by the parents, and the limb removed above the elbow. The wound healed kindly.

A year or two afterwards I was requested to attend the autopsy of this child. I then learned that, till a short time before death, it had been in good health, when suddenly it was attacked with cough, difficulty of breathing, and other symptoms of pulmonic affection. The chest gradually projected, as if yielding to some substance forcing its way out from within, and the child died as if suffocated.

On inspection of the contents of the thorax, the pleuritic cavities seemed to be filled with a mass of encephaloid disease. The lungs were almost obliterated by compression against the spine.

The amputated arm, and a most graphic drawing of the subject of the operation, made by Mr. Johnston, are still in my possession.

Case XIX. *Cancerous Ulcer of the Integuments of the Chest.*—Feb. 1851. "Mr. M——, 64 years old, had a small pimple appear on the breast, to the inside of the left nipple, a number of years since. Within six months this has ulcerated, and has since resisted every effort made to heal it. At present, it is of the size of a dollar, of unhealthy aspect, with raised indurated edges. The pain is extreme, being hot and lancinating in its character. Occasionally, there is a sensation of living animals creeping in it. The discharge is quite fetid. This gentleman is of full habit, and suffered from palpitation and asthma."

On account of the extreme suffering I advised its removal, which was very carefully done, the patient being under the influence of chloric ether. Every part of the disease, including a portion of healthy skin, an inch in breadth, surrounding it, was removed. The wound healed well, and the patient returned home greatly relieved by the operation. He was directed to use a bread and milk diet; to take moderate exercise; and employ the other means naturally suggested for the preservation of health.

In July following, I regret to say that the patient was again brought to me, having two large encephaloid movable masses on the borders of the axillæ. I advised against an operation, and he died in the course of the year.

Case XX. *Cancer of the Penis.*—May 12, 1847. For the peculiar hereditary predisposition, consult the *Remarks on Cancer of the Penis*, in the General Summary accompanying this paper.

"Some months previous to the above date, this man noticed a small sore on the glans penis, which soon healed up, leaving the prepuce adherent to the glans. In the effort at withdrawal, a raw surface was made on the glans, which gave origin to the present disease.

"On examination at the M. G. Hospital, the external appearance was healthy; but on withdrawal of the prepuce, the whole corona glandis had the aspect of a raw granulating surface, having on the top a cup-like depression, three or four lines in depth, and half an inch in diameter.

"On May 15, the patient being fully etherized, about two inches of the penis, embracing all the disease, was removed by one stroke of the amputating knife. Three ligatures only were required."

In less than a month this patient was discharged well, but died in eight months afterwards.—*Hospital Books.*

From a review of the preceding cases, and from the general impression of the results of my own practice, I feel justified in drawing the following conclusions:—

1. That, in a certain number of cases, cancerous tumours, once removed, do not again return.

2. That in a certain other number, the patient, after immunity for a longer or shorter period, has a return of disease, requiring a second operation, which sometimes proves successful.

3. That, in a great proportion of cases, the disease, after removal, returns, either in the original wound, in its neighbourhood, or in some internal organ.

4. That, in consequence of the relief from pain during the operation, afforded by anæsthetic agents, and for reasons mentioned above, it is better to remove the tumour, provided the health be not much impaired and the disease yet remains local. For, in case of return, it generally reappears in a milder form, and the patient is saved from the loathsome character it assumes when allowed to proceed unrestrained to a fatal termination.

General Summary of the Operations for Cancer at the Massachusetts General Hospital, from its establishment, in 1822, *to January,* 1852.

Breast.	Amputation.	Removal.	Not treated.	Number.	Deaths.
Scirrhus,	21	60	5	86	Amputation, 2* Removed, 3†
Encephalus,	7	5	2	14	Amputation, 1‡ Removed, 1§
Doubtful,	1	6	1?	8	Amputation, 1
Fungus hæmatodes,	1			1	
Total,	30	71	8	109	8

One patient had five operations for return of disease in cicatrices, and last wound healed.

* One of erysipelas; the other in six months of internal disease with the wound unhealed.

† One of very extensive internal disease in ten days; health poor at time of operation. Another sank in four days from the same cause.

‡ Died in two months of extensive internal disease; health poor at time of operation.

§ Died several weeks after operation; health poor at time.

Five had operations on breast twice for return of disease in cicatrix.

Four of those not treated were cases where the disease had returned in cicatrices of former operations.

Twelve were known to have had a return of disease in the cicatrix within a short time.

Tongue.—Removal 11, not treated 1; total 12. Wound healed 9, wound unhealed 2, death 1; total 12. Reappearance 1.

Lip.—Removal 9; all well. In one, the whole disease was not removed till a second operation.

Face and Cheek.—Removal 9, not treated 1; total 10. Wound healed 7, disease returned 2; total 9.

Penis.—The case of amputation of penis for cancer, reported in the *Surgical Records of the Massachusetts General Hospital*, vol. xxxviii. p. 234, died eight months afterwards. This man's father, grandfather, and great-grandfather, all died of cancer of penis.

There have been eight cases of cancer of penis in the wards of the Massachusetts General Hospital.

Congenital phymosis existed in two cases.

In one case, phymosis existed at time of entrance, but when it commenced is not stated.

Phymosis came on after disease commenced in one case.

In one case, it did not exist.

Nothing relating to the subject is stated in three cases.

Of four cases of cancer of the penis which I now call to mind, in private practice, two had congenital phymosis. The fact in regard to the other two I cannot at present remember, or discover the notes of the cases.

One case had the cancer limited to the prepuce, although it so nearly infringed on the gland that it was necessary to attack it at that point.

The operation was performed in May, 1849. I heard from the patient one or two years after, and there was no return of the disease at that time.

Amputation.—Healed 6, unknown 1; total 7. Known to have returned in the groin 2.

Testis.—Removal 5. One died in four weeks, of great internal disease; rest did well.

In Groin.—Removal 2, not treated 1; total 3. Wound healed 1, unhealed 1;* total 2.

Antrum.—Removal of disease 2,† both unhealed, removal of upper jaw 3; total 5. Well 2; death 1, of erysipelas, in nine days.

In Neck.—Removal 5. Well 3, much relieved 1, died 1; total 5.

In Axilla.—After removal of breasts 3. Unknown 1, recovered 1, death, wound unhealed 1; total 3.

Arm.—Amputations 3, did well, not treated 1; total 4.

Leg.—Amputation of thigh 5, 2 cured, 3 died;‡ amputation of leg 2, both cured; total 7.

On scalp. Removed 1; well.

From dura mater. Cut off; then cauterized; wound healed 1.

Walls of abdomen above umbilicus. Removed 1; died in 17 days of great internal disease; operation performed to relieve him of great pain of tumour.

Labia and nymphæ. Removed 1; well.

Eye. Organ extirpated 1; well.

Thigh (Gelatiniform?) Dissected out 1; well.

Of parotid. Dissected and cauterized 1; well.

Total number of cases, 186; of which 12 were not treated.

* Following cancer penis.

† In one, the disease returned in glands of neck before healing.

‡ 1 died in two weeks; 1 from cancer in groin.

Recorded Operations for Cancer in the Hospital

	No.	Sex.	Age.	Date.	Situation.	Variety.	Duration.
Private	1	F.	50	1840	Breast	Scirrhus	2 years
"	2	M.	41	1844	Right nipple	"	10 years
"	3	F.	68	1846	Right breast	Encephaloid	18 months
"	4	F.		"	Jaw	"	
"	5	F.	42	"	Right breast	Scirrhus	2 years
Hospital	6	F.	28	"	"	"	5 months
"	7	F.	76	"	"	"	20 years
Private	8	F.	45	"	"	"	2½ years
"	9	M.	50	"	Testicle	Encephaloid	
"	10	F.	52	"	Right breast	Scirrhus	2½ years
"	11	M.	64	"	Ala nasi	"	
Hospital	12	F.	23	"	Parotid	"	8 years
"	13	F.	39	"	Breast	"	9 months
"	14	M.	67	"	Penis	"	4 months
"	15	F.	53	"	Submaxillary gland	"	5 months
"	16	F.	36	"	Upper jaw	Encephaloid	3 months
"	17	F.	48	"	Breast	Scirrhus	2½ years
"	18	M.	38	"	Lip	"	2 years
"	19	F.	41	1848	Breast	"	5 months
"	20	F.	46	"	"	Encephaloid	11 months
Private	21	F.	48	"	Left breast	Scirrhus	1 year
"	22	F.	40	"	Navel	"	1 year
"	23	F.	60	"	Integuments of chest	"	15 years
"	24	M.	50	"	Mouth	"	9 years
Hospital	25	F.	42	"	Left breast	"	1 year
Private	26	F.	40	"	Right breast	"	10 years
"	27	F.	35	"	Left breast	"	6 months
Hospital	28	M.	54	"	Parotid	"	9 months
Private	29	F.	33	1849	Right breast	"	2 years
"	30	M.	40	"	Palm of hand	Fungoid	1 year
"	31	M.	7	"	Ear	"	4 months
Hospital	32	F.	52	"	Breast	Scirrhus	2 years
"	33	M.	27	"	Femur	Encephaloid	9 months
"	34	M.	54	"	Face	"	10 months
"	35	M.	71	"	Eyelid	Scirrhus	4 years
"	36	F.	37	"	Breast	"	2 years
"	37	F.	52	"	"	"	2 years
"	38	F.	32	"	"	"	6 months
"	39	M.	15	"	Lower jaw	Encephaloid	2½ years
"	40	M.	52	"	Tibia	Scirrhus	23 years
"	41	F.	24	"	Cicatrix on thigh	Fungoid	22 years
Private	42	F.	50	1850	Right breast	Scirrhus	2 years
"	43	M.	64	"	Integuments of chest	"	Many y'rs
"	44	F.	60	"	Border Axilla	"	4 months
"	45	F.	56	"	Right breast	"	4 years
"	46	F.	60	"	Upper jaw	Encephaloid	6 months
"	47	M.		"	Lip	Scirrhus	
Hospital	48	F.	24	"	Side	Melanosis	3 months
Private	49	F.	45	"	Right breast	Scirrhus	2 years

and Private Practice of Dr. J. Mason Warren.

Operation.	Immediate result.	REMARKS.
Excision	Well	Now well, 1852. (See Case I.)
"	"	Partially removed by a cancer doctoress, with caustic, six years previous.
"	"	Now living, March, 1852.
"	"	
"	"	Seen March 10, 1852. (See Case XIII.)
"	"	Breast had always been sore after nursing.
"	"	Seen December, 1851; well. Since had small lump in cicatrix. (See Case XV.)
"	"	
"	"	Returned in groin. Died in the course of a year.
"	"	
"	"	Ala had been destroyed; was restored from cheek by autoplasty.
Removed	"	Hereditary malignant tendency. One removal of tumour four years previous; another, two years previous.
"	"	
Amputation	"	(See Case XX.)
Removed	"	
Extirpation	Relieved	Reappeared in a month, with wound unhealed, and large, hard glands under angle of jaw.
Excision	Well	Seen six months after; return of disease in cicatrix, ulceration, scirrhous glands in axilla; cough.
"	"	
"	"	
Caustic applied	Not relieved	Excision six months previous; return two months previous; applied too late for a second operation.
Excision	Well	Nipple retracted, and bloody discharge previous to operation.
"	"	Died six months or a year after of cancer of rectum.
"	"	
"	"	
"	"	Now well, March, 1852.
"	"	
"	"	Returned three weeks after. Died.
"	"	Had cancer of face removed by me six years previous. Died since.
"	"	Now well, March, 1852.
"	"	
"	"	Returned. Died.
"	Much relieved	
Amputation	Relieved	Died some months after with pulmonary symptoms.
Excision	"	
"	Well	
"	"	
"	"	
"	Death	From accidental erysipelas and peritonitis.
"	Well	(See Case III.)
Amputation	"	(See Case XI.)
"	Dead	Very weak before operation; sank rapidly; no trace of malignant deposit on autopsy.
Excision	Well	Returned in axilla. Died one year after.
"	"	Encephaloid in both axillæ one year after. Dead.
"	"	Died one year after with typhoid symptoms.
"	"	Remained well two years. Died of internal disease.
"	"	Now well, 1852.
"	"	
"	"	
"	"	Well until 1852; then return in axilla.

Recorded Operations for

	No.	Sex.	Age.	Date.	Situation.	Variety.	Duration.
Private	50	M.	30	1850	Thigh	Encephaloid	2½ years
"	51	M.	68	"	Lip	Scirrhus	1 year
"	52	F.	68	"	Right breast	Scirrhus and encephaloid	1 year
"	53	F.	60	"	Ala nasi	Scirrhus	
"	54	F.	38	"	Right breast	"	1 year
"	55	M.	30	1851	Arm	Encephaloid	6 months
"	56	F.	54	"	Left breast	Scirrhus	14 months
"	57	M.	54	"	Ala nasi	"	14 months
"	58	F.	64	1st 1841 2d 1851	Right breast	"	1 year
"	59	M.	35	1851	Testicle	Encephaloid	
"	60	F.	49	"	Left breast	Scirrhus	2 years
"	61	M.	35	"	Ankle	Encephaloid	3 years
"	62	F.	60	"	Left breast	Scirrhus	6 months
"	63	F.	60	"	Right breast	"	6 months
Hospital	64	F.	62	"	Neck	Encephaloid	20 years
Private	65	M.	84	"	Parotid	Fungoid	6 months
"	66	F.	60	"	Right breast	Scirrhus	2 years
"	67	F.	52	"	Left breast	"	6 months
"	68	F.	50	"	"	Encephaloid	6 months
"	69	F.	35	"	Right breast	Scirrhus	9 months
"	70	F.	50	"	"	"	9 years
"	71	M.	48	"	Lower lip	"	3 years
"	72	M.	39	1852	Back	"	3 months
"	73	M.	70	"	Face	"	1 year
"	74	F.	44	"	Right breast	"	4 years
Hospital	75	F.	50	"	"	"	1 year
"	76	M.	55	"	Parotid	"	25 years

No. 33 had been in the hospital three months at a previous date, for disease of the knee, and was discharged relieved. After the operation, some pulmonary disease developed itself, and when the stump had partially healed, he was transferred to the Medical Department. His disease was thought to have been phthisis, but no autopsy was allowed.

Cancer—Continued.

Operation.	Immediate result.	REMARKS.
Excision	Recovered	Returned; reported amputation of thigh by quack; death on spot.
"	Well	Now well, 1852.
"	Recovered	Operation by request of friends. Disease returned, and she died.
"	"	I removed cancer from her nose five years previous. Returned past year.
"	Died	Erysipelas.
Amputation	Recovered	Amputation at shoulder-joint. (See Case XII.)
Excision	Well	
"	"	
"	"	First incision 1841; return 1850; second excision 1851. (See Case XIV.)
"	Recovered	Died the year after with anomalous symptoms. (See Case XII.)
"	Died	From erysipelas.
Amputation of thigh	Recovered	Died with pulmonary symptoms some months after.
Excision	Well	Milk abscess thirty years previous. Now well, 1852.
"	Recovered	Died after of internal disease. (See Case XVI.)
"	Well	Now well. 1852.
"	"	Returned; bled freely from tumour before operation; much relieved by operation.
"	"	Now well, 1852.
"	"	Believed to be well, 1852.
"	"	Now well, 1852.
"	"	Now well, 1852.
"	"	Had a cancer removed from left breast twenty-five years ago. (See Case X.)
"	Recovered	Had been three or four times operated on. Returned 1852.
"	Well	Now well, 1852.
"	"	
"	"	
"	"	Had been operated on by cancer doctor during seven or eight months.
Removed	Doing well	

BREAST.

	Scirrhus.	Enceph.	Total.
Right*	19	1	20
Left	7	2	9†
Not given	8		8
Total	34	3	37

Deaths 8, only 3 of which were immediate.

	Scirrhus.	Enceph.	Total.
Parotid‡	2	1	3
Face	1	1	2
Ear		1	1
Lip	4		4
Eyelid	1		1
Nose	2		2
Mouth	1		1
Upper jaw		2	2
Lower jaw	2	1	3
Neck		1	1
Back	1		1
Axilla	1		1
Arm		1	1
Palm of hand		1	1
Integuments of chest	2		2
Penis	1		1
Testicle		2	2
Navel	1		1
Femur		2	2
Tibia	1		1
Ankle		1	1

* 1 case of right breast, of scirrhous and encephaloid character, is included in the deaths.

† Disease is known to have returned in 7.

‡ Melanosis of the side was operated on *once*, and a cicatrix (enceph.).

§ 2. TABLE OF RESULTS OF SURGICAL

By FRANK H. HAMILTON, M. D.,

CARCINOMA.

CARCINOMA OF

No.	Original seat of disease.	Age when it commenced.	Age when operated on.	Sex.	Temperament.	Residence.	Occupation.	Cause.
1	Mamma.	38	45	F.	Nervous.	Wayne Co., N. Y.		Been married twice, but never conceived.
2	Mamma.	40	47	F.	Nervous.	Erie Co., N.Y.		Married several years but never conceived.
3	Mamma.	41	43	F.	Lymphatic.	Monroe Co., N. Y.	Seamstress.	Married, and has children.
4	Mamma.	49	54	F.	Bilious.	Cayuga Co., N. Y.		Mother had cancer.
5	Mamma.	35 or 40	48	F.	Nervo-bilious.	Wyoming Co., N. Y.		
6	Mamma.	35	39	F.		Seneca Co., N. Y.		
7	Mamma.	45	65	F.	Sanguineous.	Windsor, Vt.		
8	Mamma.	59	61	F.		Niagara Co., N. Y.		
9	Mamma.		43	F.	Nervous.	Cayuga Co., N. Y.		
10	Mamma.	25	30	F.	Sanguineous.	New York.		Not married.
11	Mamma.	22	25	F.	Lymphatic.	Cattaraugus Co., N. Y.		
12	Mamma.	49	56	M.		New York.		Has unusually large breasts.
13	Testis.	31	42	M.	Nervous.	Erie Co., N.Y.	Merchant.	Mechanical injury.
14	Lymphatic gland under angle of jaw.	20	21	M.	Lymphatic.	Canada West.		
15	Lymphatic gland, or subcutaneous cellular texture in parotideal region.	19	22	F.	Lymphatic.	Erie Co., N.Y.	Housemaid.	Mechanical injury.

OPERATIONS IN MALIGNANT DISEASES.

Professor of Surgery in the University of Buffalo.

GLANDULAR STRUCTURES.

Progress: state of part and of patient.	Mode of operation.	How long remained cured.	How soon returned.	How soon died.	Examination of product.
Commenced on outer verge of gland; whole breast involved and part of the pectoral muscle; small ulcerations at two points; health tolerable.	Knife; removed the whole gland and part of pect. m.		Immediately.	6 months of same disease.	
Involves two-thirds of gland; not ulcerated; health good.	Knife.	6 years.			Heteromorphous; some portions hard and caseous; other portions composed of large cells, containing variously-coloured matter.
Involves most of the breast; not ulcerated; health good.	Knife.	2 years.			Heteromorphous; irregular and hard.
Involves whole breast; not ulcerated; health tolerable.	Knife.	2 years.			Consistence of a raw potato.
Involves half of breast; not ulcerated.	Knife.		1 year.	2 years of same disease.	Structure quite hard; white and yellowish-white.
Involves most of breast; health poor; coughs; not ulcerated.	Knife.	3 years.		4 years of same disease.	
Whole gland involved; not ulcerated; two glands in axilla enlarged; healthy.	Knife; removed axillary gland also.	Never heard of her since.			Hard; crispy; some small cysts.
Size of a hen's egg; nipple much retracted; not ulcerated.	Knife.	2 years.			
Half of breast involved; not ulcerated; health tolerable.	Knife.	10 years.			Hard.
Size of a small hen's egg; irregular; hard; not ulcerated; near axillary verge of gland; healthy.	Knife; removed the tumour only	8 years.			Structure firm; section crispy. (I am not certain that it was scirrhus, but think it was.)
Size of a small hen's egg; not ulcerated.	Caustic by an empiric.		Immediately.	6 months.	
Size of a large nut; one inch below the nipple; not ulcerated.	Caustic by a surgeon.		Immediately, & 1 year after it was very large.		
Testis slightly enlarged; indurated; lobular; painful; not ulcerated; chord slightly enlarged; health bad.	Knife.	6 months.			Firm; cuts like cartilage; an albuminous fluid easily expressed.
One inch in diameter; hard; skin adherent; painful; not ulcerated.	Knife.				Structure hard; opaque; cut leaves a glossy surface.
Involved the whole parotideal region; hard; knobby; painful; of late growing rapidly; health good.	Knife.	2 years.			Structure hard; colour grayish-white; glossy.

No.	Original seat of disease.	Age when it commenced.	Age when operated on.	Sex.	Temperament.	Residence.	Occupation.	Cause.
16	Under lip.	52	60 64 64	M.	Sanguineous.	Wyoming Co., N. Y.	Farmer.	
17	Under lip.	41	42 43	M.	Sanguineous.	Simcoe, C. W.	Farmer.	Originated from a small sore which remained after a fever.
18	Under lip.	40	40 56 57	M.	Sanguineous.	Chatauque Co., N. Y.	Farmer.	Smokes with a short pipe.
19	Under lip.	53	55	M.		Erie Co., N.Y.	Labourer.	
20	Under lip.	53	55 55 56	M.	Nervo-sanguineous.	Erie Co., N.Y.	Gardener.	
21	Commissure of lips.	36	38	M.	Sanguineous.	Monroe Co., N. Y.	Merchant.	
22	Side of tongue.	52	53	M.		Niagara Co., N. Y.	Labourer.	
23	End of tongue.	44	46	F.	Nervous.	Erie Co., N.Y.		
24	Nares.	28	52	M.	Bilious.	Erie Co., N.Y.	Farmer.	

MUCOUS STRUCTURES.

Progress: state of part and of patient	Mode of operation.	How long remained cured.	How soon returned.	How soon died.	Examination of product.
Began as an ulcer, covered with a hard crust; the ulcer was destroyed by caustic; four years after this, it involved the whole right side of the lip, and I cut it out and closed the wound by anoplasty; it was removed by caustic; health generally good.	Caustic.		2 months.		
	Knife with anoplasty.		4 months.		
	Caustic.		Immediately.		
When the ulcer had remained a year, caustic was applied. The ulcer returned, and after 18 months was cut out. Again it returned, involving now the submaxillary gland, and after two years the gland also was cut away; the wound never healed, and the bone is at last diseased also.	Caustic.		Immediately.		
	Knife.		1 month.		
	Knife.		Immediately.		
Began as a wart; destroyed by actual cautery; returned, and when it had remained as an ulcer 16 years, potential cauteries were applied; the ulcer now spread rapidly, and I cut it out.	Actual cautery.		1 year.		
	Potential cautery.		1 month.		
	Knife.	5 years.			
Began as a small hard tumour, and when about the size of a hazel-nut it was cauterized; now it is a large, irregular, malignant ulcer.	Caustic.		Immediately.		
Began as a vesicle; when it opened there was left an ulcer with a hard base; caustic was applied; it returned, and the knife was used; again it returned, and caustic was used; health not good.	Caustic.		Immediately.		
	Knife.		2 months		
	Caustic.	1 year.			
Began as a fissure in the skin; became an indurated ulcer; caustic was applied; it became worse; and I removed it with a knife, and closed it by anoplasty; health bad.	Caustic.		Immediately.		
	Knife and anoplasty.				
Began as a fissure in side of tongue; gradually enlarged until an empiric applied caustic; then became much larger; now ulcer is two inches in diameter; base of edges indurated; painful, &c.	Caustic.		Immediately.		
Began as a small hard lump; when I operated it was open, and the ulcer about one inch in diameter; health bad.	Knife.		1 year.	2 years after, of same disease.	
Commenced as an ulcer in nose; right ala destroyed, and inferior turbinated bone gone; health poor.	Knife and anoplasty.	6 months.		2 years, of same disease.	

CARCINOMA OF MUCOUS

No.	Original seat of disease.	Age when it commenced.	Age when operated on.	Sex.	Temperament,	Residence.	Occupation.	Cause.
25	Rectum.	33	31	M.		Erie Co., N.Y.	Mechanic.	Piles.
26	Rectum.	43	44	M.	Nervous.	Monroe Co., N. Y.	Labourer.	
27	Glans penis.	59	60	M.	Nervous.	Niagara Co., N. Y.	Labourer.	Mechanical injury.
28	Glans penis.	53	55	M.	Nervous.	Erie Co., N.Y.	Nurse.	Congenital phymosis.
29	Glans penis.	44	45	M.	Nervous.	Cattaraugus Co., N. Y.	Labourer.	

CARCINOMA OF

30	Skin of finger.	36	49 50	M.	Nervo-sanguineous.	Chemung Co,, N. Y.	Farmer.	Wart.
31	Skin below outer angle of eyelids.	45	62	M.	Sanguineous.	Genesee Co., N. Y.	Brickmason.	
32	Skin of nose.	40	45	M.	Sanguineous.	Woodstock, Vt.		
33	Skin of face below eyelid.	45	45	M.	Melancholic.	Cayuga Co., N. Y.		
34	Skin of thumb.	75	77	M.	Sanguineous.	Niagara Co., N. Y.		Hereditary.
35	Skin on back of hand.	57	58 59 60	M.		Monroe Co., N. Y.		A brother, two years older, died of an ulcerated tumour outside of neck.
36	Skin over parotid region.			M.	Sanguineous.	Seneca Co., N. Y.	Farmer.	
37	Skin of face below outer angle of eye.	50	62	M.		Erie Co., N.Y.	Mechanic.	

CARCINOMA OF

38	Subcutaneous cellular texture of face, or lymphatic glands.	42	48 49	M.	Nervous.	Erie Co., N.Y.		

STRUCTURES—*Continued.*

Progress: state of part and of patient.	Mode of operation.	How long remained cured.	How soon returned.	How soon died.	Examination of product.
Commenced as bleeding piles, and about four months before he was operated on it assumed a cancerous character; the caustic was applied by an empiric, and it immediately extended upward beyond the reach of the knife.	Caustic.		Immediately.	4 months.	
Commenced as a "lump;" when operated upon it was an inch in diameter; irregular, hard, painful, ulcerated; health bad.	Knife.	2 years.			Structure hard, firm; cut surface smooth and glossy.
Bruised his penis about a year since; whole glans and a part of prepuce involved; ulcerated; health bad.	Knife; amputation.	1 year.			Structure opaque and hard; also soft and granular, or vegetating.
Whole glans involved, and part of prepuce; health tolerable.	Knife; amputation.	2 years.			Structure chiefly spongy and granular, being covered with minute vegetations.
Glans and part of body involved; ulcerated; very feeble.	Knife; amputation.	6 months.			Structure hard; fibro-cartilaginous; warty.
TEGUMENTARY STRUCTURES.					
During 14 years the wart presented nothing unusual; he then tied it off, and the disease within one year involved the whole finger with its bones; health good.	Ligature.		Immediately.	He died finally of erysipelas.	Bone carious; soft parts heteromorphous.
	Knife; amputation.	10 years.			
Commenced as a "ringworm;" caustic was applied a short time since; now a large open ulcer.	Caustic.		Immediately.		
Began as a small crust; in five years it had destroyed half an inch of end of nose; healthy.	Knife.	1 year.			
Half an inch in diameter.	Knife.	2 years.			
Began as a wart; twice fell off and healed spontaneously; now one inch in diameter; indurated ulceration.	Caustic.	2 years.			
When first removed was like a wart; when removed by caustic was the size of a two-shilling piece.	Ligature.		Immediately.		Structure when amputation was made hard at points; also soft and pulpy.
	Caustic.		Immediately.		
	Amputation		Immediately.		
Began as a small crust; now one inch in diameter; health good; involves lobe of ear.	Knife and anoplasty.		Immediately.	6 months.	
Began as a crust; now three inches in diameter; malar bone affected; health poor.	Knife, chisel, and anoplasty.	6 months.			
CELLULAR TEXTURE.					
Began as a small movable tumour under ramus of jaw near its middle; when it had existed six years, an empiric applied a caustic; the wound healed slowly, and the bone became involved; health at time of second operation bad.	Caustic.		Immediately.		Structure of bone soft, spongy, and cerebriform.
	Knife and saw. I removed more than half of inf. max.			1 month.	Soft parts indurated and heteromorphous.

CARCINOMA

No.	Original seat of disease.	Age when it commenced.	Age when operated on.	Sex.	Temperament.	Residence.	Occupation.	Cause.
39	Humerus.	41	41	M.	Bilious.	Erie Co., N.Y.	Labourer.	

COLLOID.

40	Glands, or cellular structure of groin.	45	48	M.	Bilious.	Erie Co., N.Y.	Tavern-keeper.	Tumour.
41	Subcutaneous cellular texture of labia.		25	F.	Phlegmatic.	Chatauque Co., N. Y.		
42	Inner surface of uterus.	42 or 43	44	F.	Nervous.	Chatauque Co., N. Y.		

ENCEPHALOID.

43	Mucous membrane of nares.	4	5	F.	Nervous.	Orleans Co., N. Y.		She has a scrofulous appearance.
44	Upper eyelid.	39		M.		Ohio.	Physician.	
45	Upper eyelid.	41	45	M.	Sanguineous.	Erie Co., N.Y.	Steamboat-runner.	
46	Skin over parotid region.	31	45	M.	Bilious.	Monroe Co., N. Y.		
47	Cellular structure under tendo-achillis.	55	56	M.	Sanguineous.	Orleans Co., N. Y.	Merchant.	Probably a sprain.
48	Subcutaneous cellular structure near ankle-joint.	20	22	F.	Nervous.	Cayuga Co., N. Y.		

OF BONE.

Progress: state of part and of patient.	Mode of operation.	How long remained cured.	How soon returned.	How soon died.	Examination of product.
Involved whole of upper arm and part of shoulder; ulcerated; bone necrosed; health bad.	Knife; amputation at shoulder-joint.		Never healed.		Structure opaque; white; solid; heteromorphous.
Tumour grew slowly at first, but rapidly during the last year; now about ten inches in diameter; health impaired.	Knife.	1 year.			Tumour weighed $3\frac{1}{4}$ pounds; structure gelatiniform; colour various shades of green and yellow, the green predominating.
Tumour large and pyriform; has a firm, elastic feel; been growing slowly.	Knife.		6 months.		Tumour weighed near two pounds; structure fibrous and partly gelatiniform; colour yellowish and grecnish.
Had leucorrhœa six years; irregular menstruation five years; health very poor; has a large polypus projecting from vulva; pyriform, firm, elastic.	Ligature. Ligature.		3 months. Immediately.	4 months.	First tumour weighed $1\frac{1}{2}$ pounds; structure caseous, fibrous, and gelatiniform.
Commenced in Feb., 184–, as a polypus; four months after it was removed by the forceps; in one year it again filled the nose, and dislocated the right eye; health poor.	Evulsion.		Immediately.		
Began as a small bright-red tumour on under side of upper lid; cut it out four times; last time it did not heal; whole upper lid now involved; tumour size of a hen's egg; from the first appearance of the tumour until he died was not more than three years.	Knife. Knife. Knife. Knife.		Soon. Soon. Soon. Immediately.	1 year.	
Large tumour, with an open bleeding surface; health poor.	Knife.		Immediately.	6 months.	Structure entirely heteromorphous; in part cerebriform, and in part firm, opaque, and occasionally spongy.
Tumour six or eight inches in diameter; ulcerated and bleeding; health poor.	Ligation of common carotid and caustic.		Immediately.	6 months.	
In one year it had attained the size of two fists; did not ulcerate; health poor.	Knife; amputation.		8 weeks in stump.	5 months.	Structure cerebriform; muscles softened and disorganized.
Involved most of outside of ankle-joint.	Knife.		Immediately.	1 month.	Structure nearly resembling a mammary gland, but when it returned it became spongoid.

ENCEPHALOID—

No.	Original seat of disease.	Age when it commenced.	Age when operated on.	Sex.	Temperament.	Residence.	Occupation.	Cause.
49	Alveoli of superior maxilla.	30	34	F.	Nervous.	Niagara Co., N. Y.		
50	Alveoli of inferior maxilla.	34	37 40	M.		Herkimer Co., N. Y.	Farmer.	
51	Superior maxilla, or malar bone.	3	4	M.		Seneca Co., N. Y.		
52	Probably the humerus near the shoulder-joint.	40		M.	Bilious.	Erie Co., N.Y.	Labourer.	
53	Probably the radius and ulna near the wrist.	33	35 36 40	M.	Sanguineous.	Cayuga Co., N. Y.	Merchant.	Fracture.
54	Tibia.	40	40	M.		Cayuga Co., N. Y.	Labourer.	

MELANOSIS.

55	Subcutaneous cellular texture and skin.	Congenital.	16 17	M.	Sanguineo-bilious.	Erie Co., N.Y.	Labourer.	Complexion of family very dark; at birth he had melanotic tubercles on back of neck.
56	Skin of shoulder.		25	M.	Phlegmatic.	Livingston Co., N. Y.	Merchant.	Scrofulous.
57	Lymphatic gland of neck.	34	41	M.	Sanguineous.	Erie Co., N.Y.	Farmer.	Mechanical injury.
58	Outer margin of iris.	22	34 45 46	M.		Livingston Co., N. Y.	Labourer.	
59	Lymphatic glands of groin.	20	22 23 23	F.				

Continued.

Progress: state of part and of patient.	Mode of operation.	How long remained cured.	How soon returned.	How soon died.	Examination of product.
Has been cut out twice; the third time it had attained the size of a hazel-nut; it was very painful and tender; I removed a large portion of sound bone; opening into the antrum.	Knife. Knife. Knife and chisel.		1 year. 1 year.		Structure spongoid.
Was first cut away with a knife; returning, I removed it, when about the size of a pullet's egg, with a chisel and knife; health good.	Knife. Chisel and knife.		2 years.		Structure at second operation bony and spongy, or crectile.
Began six months before the operation was made; then occupied most of the parotid region; not ulcerated; health bad.	Knife and chisel.		Immediately.	9 weeks.	Structure cerebriform, cystic and bony; bone carious.
Involved most of upper arm; open and sloughing; health bad.	Knife; amputation at shoulder-joint by Dr. Winnie.			1 year.	
Began one year after a fracture of radius and ulna, near the seat of fracture; in two years the tumour involved most of palmar surface of forearm; health poor.	Knife. Caustic. Knife.	10 years.	1 year. 2 years.		Structure, the first time it was removed, was cerebriform and spongy.
Size of a large orange; ulcerated; bleeding; growing rapidly; bone carious.	Knife; amputation above the knee.	2 years.			Structure spongoid, pulpy, and bony; muscles of back of leg soft; a small tumour in ham.
The tubercles on back of neck began to increase about a year since; I cut them out; they soon returned, and an empiric employed caustic; he died soon after.	Knife. Caustic.		2 months. Immediately.	6 months.	Soft; nearly gelatiniform; colour dark-brown.
Tumour been growing several years; now size of an orange; health good.	Knife.	2 years.			Structure firm, fibrous; colour mottled, black and white.
Bruised his shoulder seven years ago; always been tender; grew mostly within a month; size of a hickory-nut.	Knife.	3 years.			Structure firm; cut smooth and glossy; colour dark-blue.
First seen at junction of cornea with sclerotica; when size of a hazel-nut, was cut off twelve years after it commenced; in eleven years it had attained same size, and was cut off again; in one year more it was larger than before, and I extirpated the eye & lachrymal-gland; health good.	Knife. Knife. Knife; extirpation of eyc, &c.	4 years.	1 year. 1 month.		Structure almost entirely a black pigment, inclosed within a thin cyst, and intercepted by a few vascular bands.
It was first cut out when but two or three glands were involved; then when six or more were involved; the last operation was made since I saw her, and she died soon after.	Knife. Knife. Knife.			6 months.	

§ 3. FACTS AND OBSERVATIONS CONTRIBUTED BY DIFFERENT SURGEONS AND GLEANED FROM AMERICAN AND EUROPEAN AUTHORS.

In a letter which I received, in March, 1852, from Professor Paul F. Eve, of Georgia, this gentleman informs me that he had, within the last eighteen months, operated upon twelve cases of cancerous tumours, in every one of which the disease had returned. He thinks that surgery promises very little in this affection. "It might do more," he says, "could patients be brought to submit to the knife at the earliest possible period after the disease is known to be cancerous." Dr. Eve recognizes the distinction between cancerous and cancroid affections, and insists upon a bread and milk diet after extirpation, though none of his patients, it would seem, have ever fully carried it out.

Of the various forms of soft cancer, Dr. Eve has never met with an instance, whether operated on or not, in which the disease did not end fatally, and that, too, more speedily than in scirrhus. His experience confirms the opinion that the younger the patient is the more rapid will be the malady, and the sooner will it occasion death.

Dr. Eve gives a case of cancer of the skin, for which he removed a large portion of the right cheek, with a part of the ear; the patient was a man aged seventy-five, and there was no repullulation at the end of ten years.

Dr. George W. Norris, of Philadelphia, speaks discouragingly of operations for the removal of malignant tumours. In his letter to me, dated November, 1852, he says: "But few, I take it, at this day, who have had an opportunity of following their patients, will pretend to say that these growths do not almost invariably return." Dr. Norris has carefully examined the records of the Pennsylvania Hospital, of which he is one of the surgeons, with regard to the subject under consideration; but he finds that they furnish no useful results of any kind. Indeed, it would seem that, for many years past, all the surgeons who have been connected with that institution have been so averse to the employment of the knife in malignant disease that but very few such cases have been admitted into its wards for operation.

The testimony of Professor Pope, of St. Louis, is of the same import. "As a result," he remarks, "of my operations in cases of true cancer which I have been able to follow, I can say with Broca that "it never forgives." In all, without exception, the disease has

returned within from five weeks to twelve months after extirpation, and every patient has, in consequence, died sooner or later from its effects. The very reverse has been the case with the carefully removed cancroid affections, in whatever part of the body situated."*

Professor Hamilton, of Buffalo, who has paid much attention to the subject of malignant diseases, and whose interesting table accompanies this report, thinks himself authorized to conclude, first, that in glandular scirrhous carcinoma an operation should be encouraged at almost every period prior to the commencement of ulceration; the earlier, however, it is performed, the better will be the prospect of success. Secondly, that the knife should be used with reluctance after the tumour has resumed the character of an open sore. Thirdly, that the whole gland should always be removed, however limited the disease. Fourthly, that in tegumentary cancer, even when the ulceration is pretty extensive, excision, especially with the aid of anaplasty, will frequently effect a radical cure. And, fifthly, that in no case are caustics preferable to the knife.

In May, 1850, Professor Warren, of Boston, presented to this Association, at their meeting in Cincinnati, an account of eight cases of malignant disease, which he had relieved, if not permanently cured, by excision.† Of these cases, four were scirrhous, and the remainder cephalomatous. Those belonging to the first category all involved the mammary gland, and were so well marked in their character, both as it respects the symptoms and the morbid structure, as to leave no reasonable doubt in the mind of the operator as to their carcinomatous nature. The ages of the patients were, respectively, fifty-five, fifty-four, forty, and fifty-five.

The tumour, in the first case, had been discovered two years previously, and was, at the time of the operation, of the size of an egg, very hard, and movable on the pectoral muscle, without any discoloration of the skin. The entire breast was removed, along with the nipple, the condition of which is not mentioned. The patient had enjoyed good health up to the time of the operation, and had been the mother of a number of children. She finally died, at the age of eighty-eight, of peripneumonia, at the end of thirty-three years after the operation, and without any return of her disease.

In the second case, the patient, an unmarried woman, was fifty-four years of age, of very large stature, athletic, and of florid complexion.

* Letter to the Chairman of the Committee, July, 1851.

† Transactions, vol. iii. p. 395, 1850.

The tumour is said to have been a genuine scirrhus, and was attended with enlargement of the axillary ganglions. She survived the operation more than twenty years, without any relapse, and at length died of disease of the heart with effusion into the thorax.

In the third case, the patient, aged forty, lived nearly nineteen years after the extirpation, when she died of some other malady. The tumour, which had a scirrhous hardness, was of the size of an egg, painful, but not tender, and movable on the pectoral muscle. The operation included only the outer half of the breast, the nipple, with the remainder of the organ, being left intact.

A lady, fifty-five years of age, had a tumour in the right breast, about the size of an egg, hard, irregular in form, somewhat tender, and occasionally painful. It had been caused, as was supposed, by a fall on the part the previous summer. The tumour was fixed, but the gland itself was movable on the pectoral muscle. The affected mass, together with a portion of the mamma, was removed with the knife, and the woman died twenty-two years afterwards, without any return of cancerous disease.

In the other division, also embracing four cases, the malady was of a cephalomatous character, and occupied various regions of the body.

In the first case, the patient, a healthy man, aged about thirty, had been affected a number of years with a tumour, of the size of an orange, situated on the right side of the neck in the region of the parotid gland. It was of a red colour, firm and elastic to the touch, and ulcerated on the surface. The wound healed in about a month, and the patient, when last seen by Dr. Warren, ten years after the operation, was perfectly well.

A stout, healthy man, aged thirty, of good habits, had a red, soft, bleeding tumour in the left nostril, emitting a most offensive smell, and encroaching upon the roof of the mouth and the corresponding nasal cavity. It had existed about four months, and had been the seat of frequent, and, at times, copious hemorrhages. The morbid mass was excised along with the floor of the orbit and the left side of the palate. The man continued well at the end of nine years after the operation. A portion of the tumour, examined after having been sometime in alcohol, exhibited caudate and fusiform cells, similar to those observed in encephaloid.

The third case was that of a boy, aged five years. The tumour, of the form and size of a lemon, was situated in the groin, and ex-

hibited a distinct cerebriform texture. The operation was performed in 1843, and the boy was perfectly well in 1850.

In the fourth case, the tumour involved the dura mater, and was of well-marked encephaloid character. At the time of the operation, in 1847, it had burst through the skin, and was about the volume of an egg, of a red colour, without pain, and easily disposed to bleed. A probe penetrated the substance of the tumour to the depth of three inches. The hemorrhage was great, but was suppressed by several ligatures and the actual cautery. Several months elapsed before the wound was entirely closed; but it had remained well at the time the case was reported in 1850. The patient was a female, twenty-two years of age.

I have thus given an outline of these cases, because, first, they have been reported by a gentleman of great experience and intelligence; and, secondly, because their result is in direct contradiction to that of the generality of surgeons of the present day. The account of them is, in many respects, defective, and hence much of their value is necessarily lost. Thus, in at least two of the cases, constituting the first group, no mention is made of the state of the nipple or skin, and in none is there any satisfactory description of the morbid structure. The details of the other cases are given in a more satisfactory manner, though not as minutely as could have been desired. In one of these, a section of the tumour was examined microscopically, but as it had been immersed for a considerable length of time in alcohol, no legitimate deduction can be drawn from the appearance of the caudate and fusiform bodies revealed by the instrument. It is to be regretted, moreover, that Professor Warren has not informed us of the proportion which the above cases bear to his other operations for the removal of malignant diseases.

The late Dr. George McClellan, of Philadelphia, was in the habit of frequently operating in carcinoma, scirrhus, or scirrho-cancer, as he terms the hard variety of this form of malignant disease. He was opposed, however, contrary to the advice of many writers, to a resort to the knife on the first appearance of suspicious tumours, believing that the vascular excitement which accompanies them in their early stage is unpropitious to a favourable result, if it does not, indeed, always favour the speedy return of the complaint. He considered it of great importance, in every case, to wait until the constitution is enabled, in some measure, to check the progress of the growth, and set up a barrier, as it were, around its surface, thereby

preventing its further extension. The older, in fact, the tumour is, the more favourable, he thought, the chance of a permanent cure.

There is reason to believe that this distinguished surgeon occasionally permitted himself to operate against his judgment, simply to prevent patients from falling into the hands of charlatans and cancer doctors. Speaking of the fact that very few patients ever remain contented with palliative treatment, he observes: "If we do not recommend the knife, or some more acceptable means of ridding them of the existing tumour, they will be sure to go to the rude and unskilful hands of some advertising pretender, and undergo all the hazards of empiricism. The moment, therefore, we find ourselves clear of the complications of engorgement and vascular irritation, provided other circumstances be favourable to an attempt at the radical cure, it will generally become necessary to decide upon the appropriate course. In the majority of such cases, there can be no question about the propriety of recommending the operation, which, if skilfully performed, will leave the most easily cicatrizable wound, and inflict the least agony upon the sufferer."* Where, from timidity and other causes, the patient was unwilling to submit to excision, Dr. McClellan occasionally employed caustics. "Sometimes even large tumours," he says, "will slough away entire in this manner, and leave a clean, healthy ulcer, which will afterwards close by a sound cicatrization."† It is to be regretted that Dr. McClellan has not favoured the profession with the results of his experience in this mode of removing cancerous growths.

In regard to encephaloid or medullary cancer, Dr. McClellan considers it as an essentially acute disease, the progress of which is usually so rapid as to hurry the unfortunate patient to a speedy exit from his suffering. It is only very rarely that the affection pursues a chronic course, or that its progress can be checked by remedial measures. In the former case, all attempts at eradicating the tumour by an operation, while it is rapidly extending, invariably fail of accomplishing the desired object. The disease will invariably return even before the wound left by the knife has cicatrized, thus hastening the fatal issue without hardly the benefit of a reprieve. The proper plan, under such circumstances, is to treat the case antiphlogistically, in order to enable nature to set up a landmark against the further extension of the malady. In this manner, the morbid action may

* Principles and Practice of Surgery, p. 401, Phila. 1848.

† *Op. cit.* p. 402.

sometimes be rendered dormant for a considerable length of time. "Now, if we can seize such an emergency, and perform a justifiable operation, it is possible, in this class of cases, as well as in those which were originally chronic from the start, to rid the patient of his uncomfortable and dangerous companion for the remainder of his life. The same rules of procedure, however, should always be regarded that we have laid down under the head of operations for the removal of scirrhus. We must be able to extirpate *the whole of the existing disease by a single operation*, or it will be useless to make the attempt. The system must be free from any such constitutional derangement, or internal development of organic disease, as contraindicates an operation upon hard cancer."*

Dr. McClellan teaches that melanotic tumours return even more frequently after extirpation than encephaloid; and he is of opinion also that they occur more extensively in remote parts, and secondarily among the internal organs.† I recollect a memorable instance of this disease, which was under the care of this distinguished surgeon while I was his private pupil in 1827, and which strikingly illustrates its relapsing tendency after excision. The patient, aged about thirty-five years, a stove-manufacturer by occupation, had a large number of tumours, immediately beneath the skin, scattered all over the abdomen, from above the ensiform cartilage to the pubes, of a dark bluish colour, movable, of a hard consistence, and of the volume of a pea to that of an almond. When first noticed, several years previously, they were of the size and appearance of small shot. The general health of the man during several months that I watched him was excellent, and he was never disabled from attending to his business, except when laid up after operation. The course which Dr. McClellan pursued was to extirpate three or four of the larger tumours at a time, and then to wait until the resulting wounds were healed, when he would resume the attack. Thus he continued until he became perfectly satisfied that further excision would be unavailing; for as fast as he removed one deposit another would spring up in its place, while, meantime, numerous other tumours formed beneath the surface around. The patient finally died from the effects of the disease, which no doubt had seized upon the internal organs. The particulars of this, and of several other interesting cases of melanosis, exhibiting this tendency in the disease to return after extirpation, are mentioned in Dr. McClellan's work on *Surgery*, edited by his son.

* *Op. cit.* pp. 411–415.

† *Op. cit.* p. 420.

My colleague, Dr. Palmer, Professor of Anatomy in the University of Louisville, has politely communicated to me a case of melanosis, remarkable for its latent character, and for its relapsing tendency after operation. A lady, aged sixty-three, consulted him in the summer of 1851, in relation to a tumour on the top of her head, which was giving her some pain. It was about the size of a chestnut, firm in its consistence, of a rounded form, and of a decidedly black colour. It was first noticed, about twenty years ago, as a small black spot, which remained stationary until two years since, when it began to increase in size; it had never been painful, and troubled her only by being in the way of her comb in dressing her hair. Her health was as good as usual, she having for years been subject to occasional attacks of indisposition. Professor Palmer did not see her again until the following winter, when he was requested to visit her for an attack of facial neuralgia. The tumour was now double the size as at the first examination five months ago. The neuralgia was somewhat protracted; but as soon as the woman had sufficiently recovered, the tumour was removed with the knife. On being submitted to the microscope, its malignant character was found to be very apparent. In a short time, and before the wound was healed, a black substance, about the size of a pea, shot up among the granulations, and extended several lines beneath the healthy skin. This being excised, the wound closed without any farther manifestation of disease in its immediate vicinity. But before it had entirely cicatrized, other black spots began to show themselves on different parts of the head. There were not less than from ten to fifteen, and they all appeared within four weeks after the operation. At first, they were not elevated above the skin, but in a short time they became prominent; and in six weeks from their first manifestation they had attained the size of a large pea. The tumour was removed in February, and about the middle of April some disturbance of the general health was first observed. The woman began to look sallow, and complained of debility, loss of appetite, and indigestion. From this time on she steadily declined, and in June it was evident that internal disease was rapidly undermining her existence. Severe pain in the back and abdomen kept her almost constantly miserable; the frequent occurrence of nausea and vomiting added to her sufferings. Emaciation, loss of strength, and the cancerous cachexy became very apparent. About this time, Professor Palmer first noticed an unusual prominence of the abdomen, accompanied by an unnatural hardness, which was not limited to any particular point, but extended over the

greater portion of the walls of the cavity. By the first of September, the emaciation was extreme, and the dusky hue of the countenance was very striking.

The tumours on the head had changed but little from the description given above. Death occurred on the 13th of September; and, upon examination, the great omentum was found loaded with cancerous matter. In several places, it was nearly as thick as a man's hand. There were not only numerous lumps of melanosis, but there was also a large quantity of encephaloid intermingled with it. In fact, the soft cancer was altogether the most abundant, the black deposit being scattered about in isolated patches, in the midst of the larger mass of encephaloid. The mesentery was found to be much in the same condition. In the gastro-hepatic omentum, the melanosis was more abundant than the other form. The liver exhibited a very striking appearance. The black and the white deposits were scattered about in patches, and intermingled with a groundwork having the normal colour and structure of the organ. Near the splenic fissure were a few rounded black masses, connected with the gastro-splenic omentum. The walls of the intestines were healthy. No other parts of the body were examined.

The following case of apparently malignant disease came under the observation of Professor Mussey, and was reported, in part, many years ago, in the eleventh volume of the *New England Journal of Medicine and Surgery*, published at Boston. The patient was Dr. G. Heaton, of Berlin, Vermont, and was fifty-one years of age at the time of the operation, in February, 1822. The tumour, when first noticed, scarcely three months previously, was about the size of a filbert; but, at the period referred to, it was as large as a common fist, and had a pulpy feel at its most prominent part, where the skin was also thinner and more tense than elsewhere. As the morbid mass was deeply imbedded in the neck, it was deemed best to tie the primitive carotid artery, when it was carefully removed along with the sterno-mastoid muscle, which was lodged in its substance, and much changed in its appearance. The wound healed kindly, and the patient was directed to take daily, for some weeks, from fifteen to twenty grains of the phosphate of iron. The texture of portions of the tumour was as perfectly encephaloid as it could possibly be.

In a letter which I have had the honour to receive from Professor Mussey, dated March 22, 1853, he says: "I have this evening received a note from Dr. John Winslow, of Berlin, Vermont, the residence of the late Dr. Heaton, in which he assures me that that

gentleman never had any recurrence of the disease for which I operated upon him, and that he died of consumption in January, 1850, aged seventy-nine years."

Sir Everard Home* informs us that, in the year 1773, it was the opinion of the most eminent practitioners in London, that extirpation should be performed in all cases in which the surgeon was capable of removing the whole of the diseased structure. This advice was given with a full knowledge that contamination of the system sometimes precedes the local disorder; yet, as the evidence of the existence of this contamination is not always clear, it was thought right to afford the patient the only chance that the power of art could offer. "The want of success," continues Sir Everard, "attending the greater part of the operations performed upon this principle, has established a point which could not have been otherwise ascertained. It has produced complete proof that contamination does generally precede the absolute alteration in structure; and, in too many instances, to a much greater extent than it was reasonable to imagine. This fact, which has only been lately established, should be made universally known, as being essentially necessary to guide us in our judgment respecting the propriety of performing an operation; and I am ready to confess that in all cases where the disease has arrived at that stage in which it has acquired the power of contamination, I should be inclined, from the experience I have had, to doubt the success of the operation, and therefore could not venture to press it upon the mind of any patient. But, if the patient should desire the operation, I would not refuse to perform it; since, whatever my own doubts may be, I am not able to bring proof that the operation will always be unsuccessful."

The following remarks of Sir Everard are too pertinent to the subject before us to be omitted: "The foregoing observations are very strongly confirmed by what happens to almost every practitioner in surgery, who, in the early part of his practice, advises the operation, and performs it with very sanguine hopes of success, in cases in which, at a more advanced period of his life, from the experience he had acquired, he would not have proposed it. This happened to Mr. Hunter, and has happened to myself and to those practitioners of whose judgment I have the highest opinion."†

Dr. William Nisbet,‡ of Edinburgh, expresses himself inimical to

* Observations on Cancer, p. 171, London, 1805. † *Op. cit.* p. 176.

‡ An Inquiry into the History, Nature, Causes, and Treatment of Cancer, Edinb. 1795.

extirpation. The use of the knife, he observes, is never to be trusted as a certain resource. "It frequently hastens on the ravages of the malady."

Mr. Pearson,* on the other hand, declares that the greater number of patients have no return of the disease after the parts affected have been carefully dissected away. He strongly recommends the operation, and insists upon union by the first intention as calculated to prevent relapse. It may be added that this eminent surgeon had full confidence in the statements of Alexander Hill, respecting the result of his experience, referred to under the head of cancer of the mammary gland.

Mr. Fearon, of England, who published the third edition of his work on cancer, at London, in 1790,† strongly urges the necessity and advantage of operation in this disease. He declares that it is the only remedy, and advises its employment at an early period of the complaint, as most likely to conduce to a favourable issue. Nevertheless, he does not think that the operation ought to be entirely prohibited even when there is ulceration of the skin, firm adhesion of the tumour, or extensive enlargement of the neighbouring ganglions. His experience seems to have been almost as favourable as that of Mr. Nooth, alluded to in another part of this report. Fearon strongly insists upon healing the wound by the first intention, to the neglect of which he ascribes much of Monro's bad success.‡

The late Mr. John Abernethy,§ whose writings were formerly so popular in the United States, remarks, in speaking of malignant tumours, that, however numerous and momentous the deterring reasons may be, yet they should not prevent us from operating in many cases. He is clearly of opinion that the knife should be resorted to whenever it is perfectly certain that the whole of the morbid structures can be removed, provided always that the constitution is not so disordered, or diseased, as to render such interference nugatory. He directs that great attention should be paid to the diagnosis of malignant tumours, in order that, having ascertained their true character, an operation may be undertaken at the earliest possible moment, while the complaint occupies the smallest compass, and there is no contamination of the system at large. Resorted to

* Treatise on Cancer, pp. 5–82–83.

† A Treatise on Cancer, pp. 81–82, London, 1790.

‡ See the article on Cancer of the Mammary Gland.

§ Surgical and Physiological works, vol. ii. pp. 126–27, Philad. 1825.

under these circumstances, he has known life prolonged for five, six, or more years; and when, after that lapse of time, the malady reappeared in the cicatrice, death seemed to have been the result rather of constitutional than of local suffering. Mr. Abernethy occasionally operated after ulceration had set in, for the purpose merely of diverting the disease, as it were, from its natural course, and thereby lessening the pain and discharge consequent upon an open state of the disorder.

The views of the late Baron Boyer,* of Paris, upon this subject are very decisive. Regarding cancer, in common with Hippocrates, Celsus, Monro, and numerous other writers, as the product of an internal cause, he considers it as always liable to return after extirpation, whatever may be the age of the patient, the state of the tumour, and the condition of the system. These remarks are particularly applicable to carcinoma of the mammary glands, which he had excised in many instances, hardly a solitary one of which escaped relapse, although the wound almost invariably healed in a very short time. In a small number of his cases death occurred before the completion of the process of cicatrization, in consequence of the supervention of acute disease, the symptoms of which appeared to be influenced, in a remarkable degree, by the state of the nervous system. He rejects the celebrated maxim of Celsus, that it is better in doubtful cases to employ an uncertain remedy than to abandon the patient to a certain death. In commenting upon this injunction, he very justly observes that it would be much safer, as a general rule, to refrain from the use of the knife altogether whenever it is evident that we can achieve no good by it.

Mr. Syme,† Professor of Clinical Surgery in the University of Edinburgh, asserts that the only proceeding that deserves at all to be considered, as a remedy for carcinoma, is removal of the morbid structure. He insists upon early and complete ablation before there is any serious implication of the lymphatic ganglions, or contamination of the general system. In speaking of medullary sarcoma, the encephaloid disease of Laennec and other authors, he states that the disease, after excision, is very often followed by relapse. The chance of permanent relief seems, according to this surgeon, to be most favourable when the complaint is seated in the testicle and bones, and most hopeless when it invades the eyeball. In melanosis,

* Traité des Maladies Chirurgicales, t. ii. pp. 712–715, cinq. edition, Paris, 1845.

† Principles of Surgery, p. 73, 3d ed. Edinb. 1842.

as the tendency to extension and general involvement is less marked, the prospect of benefit from removal is not so unfavourable as in scirrhus and encephaloid.*

In speaking of encephaloid, the late Mr. Liston observes that, if removed early, it may be arrested; but that if the operation be long delayed a tumour of a similar nature, and more extensive, will almost invariably be produced. In several instances where he extirpated this form of tumour both from the mamma and testis, the malady did not return; but in all other cases the result was unfavourable.

Mr. Liston considers fungus hæmatodes as distinct from encephaloid; and while he asserts that the latter is occasionally permanently curable by the knife, he maintains that the former is always reproduced after excision, and that in a more frightful aspect, both in extent and malignity.†

Carcinomatous disease, according to this author, generally returns after ablation either in the original integuments, in the form of tubercles or buds, in the cicatrice, or in the lymphatic ganglions; very frequently all these parts are affected.‡

The late Professor Samuel Cooper, of London, whose *First Lines of Surgery* were at one time so extensively employed as a text-book in the medical schools of this country, considers that, although encephaloid has a much greater disposition to relapse, owing to its constitutional character, than scirrhus, experience occasionally brings forward a case forming an exception to this statement. As a proof of the truth of this remark, he refers to a case of fungus hæmatodes of the testis in a man, who recovered, and continued well a long time afterwards; and he adds that "we sometimes hear of the same disease in the eyes, breast, and limbs, being effectually extirpated by operation, without being followed by any return of the complaint. Unfortunately, he continues, the contrary more generally happens, so that the prognosis should be qualified by a reference to this prominent fact."§

Referring to melanotic tumours, Mr. Cooper remarks that the only chance of benefit depends upon the early removal of the disease by operation. "An eye, affected with melanosis, has been extirpated without any relapse for several years; and so have tumours of the skin and cellular tissue. Melanotic formations under the

* Elements of Surgery, by Gross, p. 145, Philad. 1846.

† *Op. cit.* p. 152.

‡ *Op. cit.* p. 150.

§ *Op. cit.* by Dr. Parker, vol. i. p. 460.

tails of horses have likewise been frequently cut away with perfect success. These facts prove that melanosis in some situations has more chance of effectual relief by operation than medullary cancer."*

The late Mr. John Burns,† Regius Professor of Surgery in the University of Glasgow, thinks that there can be no hesitation in the mind of any man, as to the propriety of urging an operation where the tumour is recent, and unaccompanied by enlargement of the lymphatic ganglions. When these bodies are diseased, he considers that there is always much danger of relapse, the probability of which is still further increased by the open state of the cancer.

Professor Burns is one of those who are inclined to recommend excision as a mere palliative measure. Experience had taught him that whenever we can remove all the parts apparently contaminated, we not merely succeed in procuring a considerable period of health, but, when a relapse does take place, death is less miserable than where no operation is performed.

The late Dr. Graefe, of Berlin, affirms that he has often extirpated *fungus hæmatodes* without any relapse having followed. He saw some of his patients in perfect health at the end of sixteen, eighteen, and even twenty years. It is proper to observe, in connection with the results of the experience of this distinguished surgeon, that most of the German pathologists did not, until recently, draw any just distinction between fungus hæmatodes and encephaloid; or, more correctly speaking, that they, in common with the French, generally employed this phrase to designate a class of tumours possessing none of the characteristic properties of malignant diseases. The probability is that the fortunate cases alluded to by Graefe were nothing but common vascular growths.

In February, 1843, Mons. Leroy D'Etiolles,‡ of Paris, published an interesting statistical account of cancer among the inhabitants of France, showing the frequency and mortality of the malady at different periods of life, in both sexes, and in different classes of society. The most valuable part of the inquiry, and that which has a direct bearing upon the objects of this communication, was to ascertain the effects of ablation upon the longevity and welfare of the patients after the operation. Of 1172 individuals in whom the malady was permitted to pursue its own course, 18 lived

* *Op. cit.* vol. i. p. 468.

† Principles of Surgery, vol. i. p. 356, London, 1838.

‡ Journal des Connaiss. Med., Paris, May, 1843.

more than thirty years after the first appearance of the cancer; while out of 801, subjected to operation, either by the knife or caustics, 4 only attained that period. Of those who lived from twenty to thirty years, 14 were operated on, and 34 were not operated on. Again, of those whose lives were prolonged from six to twenty years, there were 88 who underwent excision, and 228 whose tumours were not removed. Thus, it would clearly appear, that, so far as the prolongation of life is concerned, the result of this inquiry is opposed to the operation. The statistics upon which the above statements are based, were furnished to Leroy by one hundred and seventy-four surgeons, residing in different parts of France, and many of whom, it may be supposed, are not very accurate or competent observers. Nevertheless, the probability is that they are, in the main, correct; and if this circumstance be admitted, they exhibit operative interference, whether by the knife or caustic, in a most unfavourable aspect, no matter how early in the disease it may be employed.

Leroy himself maintains, as a result of the facts furnished him by his professional brethren, the following conclusions: 1. That extirpation does not arrest the progress of cancer; 2. Extirpation should not be adopted as a general method, except in cancer of the lip and of the skin; and 3. Cancer of other parts should not be interfered with, except when hemorrhage from ulceration threatens speedy death.*

Mons. Flaubert,† a distinguished surgeon of Rouen, states that most of the patients upon whom he has operated for cancer have had a return of the disease, either at the original site or its vicinity, or in some remote part. At present, he never resorts to the knife without much repugnance, and always declines interference when the case is complicated with enlargement of the lymphatic ganglions, rheumatic pains, or pains in the kidneys. He is convinced, notwithstanding some cases in which there was no relapse, that the human species would be greatly benefited if ablation were almost entirely proscribed.

G. L. Bayle, author of the celebrated *Traité des Maladies Cancéreuses*, published at Paris in 1833, considers that, although the prognosis is usually unfavourable, yet that the number of cases of success on record is such as to justify an occasional resort to

* New York Journ. of Medicine, vol. i. p. 420, 1843.

† Amer. Journ. Med. Sciences, n. s. vol. vii. p. 455; also, Gazette Méd. de Paris, March, 1843.

the knife. Mons. Amussat believes that the operation may occasionally save life, though he does not seem to have any confidence in it as a general rule. Professor Roux, while he is in favour of extirpation as a general proposition, admits that it is not unfrequently followed by relapse and death. He has been in the habit of teaching that cancerous tumours are sometimes removable by local and general treatment.* Delpech was satisfied that every operation performed for the removal of carcinoma is succeeded, sooner or later, by a reproduction of the malady. So thoroughly, indeed, was he impressed with this conviction that he considered all attempts at the destruction of the morbid growth, whether by mechanical or chemical means, as a mere chimera.†

Velpeau,‡ whose writings are so well known in this country, lays it down as a principle, to destroy cancerous tumours as speedily and as effectually as possible, before they have made any serious inroads upon the surrounding parts, or contaminated the constitution. He is inclined to regard them, primarily, as of a purely local character. He insists, in conformity with this view, that the only hope of curing the disease is by its early destruction by mechanical or chemical means. The longer it is permitted to remain at its original site, the greater will be the danger that it will contaminate the system by the introduction of "new morbific germs." All carcinomatous tumours are, according to this writer, liable to repullulate, though not in the same degree, or with the same rapidity or frequency. The most malignant are the melanotic, then the encephaloid, next the scirrhous, and finally, as lowest in the scale, the colloid.

One of the most recent authorities upon this subject, in France, is Mons. Vidal (de Cassis), whose work, entitled *Traité de Pathologie Externe et de Médecine Operatoire*, is the universal text-book of Parisian students. In speaking of cancer, a term under which he includes scirrhus, encephaloid, and colloid, he declares his conviction that it is a constitutional malady, and therefore regards all attempts to remove a tumour of this kind as futile and irrational. Nevertheless, he considers a resort to the knife as proper in certain circumstances; as, for example, when the morbid mass mechanically impedes the functions of an important organ, as the larynx, trachea, or pneumogastric nerve; or where the disease increases with so much

* Bulletin de l'Académie Roy. de Médécine, t. 9, 1843–44.

† Dict. des Sciences Méd. t. 3, p. 681, 1812.

‡ New Elements of Operative Surgery, by Townsend & Mott, vol. iii. p. 111, New York, 1847.

rapidity as to threaten the speedy destruction of life. In the latter case, he thinks that the malady may be deprived, at least in some degree, of its energy, by changing the theatre of its action, so that, although it may return, the patient would be likely to live longer than if no operation had been performed. Furthermore, he is of opinion that ablation would be proper where the patient suffers excessive agony, on the ground that, even if a relapse should occur, the second attack would be milder than the first, and thus lead to a less cruel death. In illustration of this view, he refers to the case of a woman, aged forty years, from whose leg he removed a very painful cancer, consequent, apparently, upon a former application of the actual cautery, and who had survived two years with hardly any suffering, although the disease had shown itself on the head soon after the operation.*

Another very respectable French authority is Mons. Nélaton,† whose work is also extensively used as a text-book, and which exhibits an excellent outline of the existing state of surgery as it is taught and practised in Paris. This writer thinks that no operation should be performed: first, when there is no certainty that we can remove every portion of the affected parts; secondly, when the tumour coexists with cancer in some internal and inaccessible viscus; thirdly, when there is full evidence of the presence of the carcinomatous cachexy; fourthly, when the malady affects certain organs, as, for instance, the eye, experience having shown that, in this case, it always returns soon after extirpation, and progresses with frightful rapidity; and, fifthly, when the disease is extremely chronic in its march, as occasionally happens in old persons. After stating that some surgeons also oppose the operation when there is more than one tumour, when it has followed the use of the knife, when it has advanced with great rapidity, or, finally, when it is ulcerated, he remarks that, although these are certainly unfavourable cases, yet he does not consider them as positive contraindications. "We see, for example," says he, "permanent cures after a second, and even a third operation; nay, we may add," he continues, "that even if we were sure that there would be a relapse, we ought still to operate in certain cases; for this relapse may be delayed for a longer or shorter time, and when it does show itself, we may by a second operation postpone the fatal issue.

* *Op. cit.* t. i. p. 494, Troisieme edition, Paris, 1851.

† Elémens de Pathologie Chirurgicale, t. i. p. 370, Paris, 1844.

Mr. Skey,* one of the surgeons of St. Bartholomew's Hospital, London, seems to think the removal of malignant tumours, in many cases, a matter of serious doubt, on account of the liability of the disease to return. He asserts that operations for malignant affections of the female breast become less and less frequent in proportion to the age and experience of the surgeon. He rejects, as unfit for such a proceeding, all cases of tumours marked by rapid growth, large size, and indefinite outline, by considerable enlargement of the axillary ganglions, by the presence of ulcerative action, and by constitutional disturbance.

Professor Pirrie,† of Aberdeen, Scotland, regards removal by excision as the advisable proceeding. The operation should be resorted to early, before the establishment of lymphatic invasion, and should be performed effectually, the surrounding tissues being raised to a considerable extent along with the tumour. Operative interference, after the occurrence of lymphatic disease, would only bring discredit upon surgery by subjecting the patient to useless suffering, followed by a return of the tumour, and probably, also, by a more rapidly fatal termination of the case.

Mr. Fergusson,‡ Professor of Surgery in King's College, London, the latest English authority, while he admits with every unprejudiced observer that the removal of malignant growths by the knife is very liable to be followed by relapse, nevertheless enjoins that an operation should always be resorted to, provided all the morbid structure can be embraced in our incisions. Excision, in his judgment, affords the only chance of security, and hence he considers it the duty of the practitioner to urge the patient to submit to it. The operation should be performed as early as possible, before the complaint has made much progress. When the skin is seriously involved, when the lymphatic ganglions are numerously or considerably enlarged, and when the general health is much impaired, or the system tainted by the morbid action, it would be unwise to interfere.§

The following are the conclusions at which Dr. Walshe has arrived, after a careful study of the whole subject of cancer, in his celebrated work:‖ "Here, then, may be closed the inquiry into the efficacy of excision as a therapeutical measure. From the facts, figures, and

* Operative Surgery, p. 388, Phila. 1851.

† Principles and Practice of Surgery, by Dr. Sargent, p. 771, Phila. 1852.

‡ System of Practical Surgery, p. 140, Phila. 1853.

§ *Op. cit.*, p. 186.

‖ On the Nature and Treatment of Cancer, p. 244, London, 1846.

inferences now brought forward, the conclusion is inevitable and imperative, that extirpation of cancerous growths with the knife can neither be regarded as a means of curing cancer, nor of prolonging the existence of persons afflicted with the disease. The accumulated experience of intervening ages, dispassionately scrutinized and fairly interpreted, pronounces the very verdict that was upwards of two thousand years ago rendered by Hippocrates in his memorable aphorism. The lapse of centuries of civilization has done no more, in respect to the question of operation, than to furnish elements for demonstrating what the observant genius of one man had, in an era of comparative barbarism, so acutely divined!"

Professor Bennett* believes that excision ought to be had recourse to, both as a curative and as a palliative remedy. "Undoubtedly, the earlier it is performed the more it is likely to be attended with permanently good results. But even in advanced cases it should be tried with hopes of success; and so long as it continues to *return in the same place*, the excision should be repeated." . . . "The practical rule, then, which pathology and experience unite in causing us to adopt, seems to be this: that so long as a cancer remains fixed in a part which is capable of being removed, and the strength of the patient is not much reduced, so long is the surgeon warranted to interfere. If this applies to cancerous, it does so with tenfold force to cancroid growths, which everything that we know warrants us in asserting are much less fatal and malignant." We have already seen that, in the opinion of Dr. Bennett, cancerous tumours are for some time purely local in their character.

Mons. Broca, the latest systematic writer on cancer, believes that excision should always be resorted to, both in primary and relapsed cancer, provided the general system remains free from infection. The sources of this infection will thus be removed, and its occurrence delayed.† This advice is given by Mons. Broca, in despite, as it were, of the discouraging results of operation, of which no one seems to be more fully aware than himself. In his *Thesis*, published a few years ago, of which an abstract is to be found in the *St. Louis Medical and Surgical Journal*, for September, 1851, from the pen of Professor Pope, he announces his conviction, first, that, in genuine cancer, the disease always returns, sooner or later, after extirpation, either in or around the cicatrice, in the corresponding lympha-

* On Cancerous and Cancroid Growths, p. 245, Edinb. 1849.

† British and Foreign Med.-Chir. Review, for January, 1853, p. 116; New York ed.

tic ganglions, or, more rarely, in some other part of the body; and, secondly, that the relapsed tumour always progresses, both locally and generally, more rapidly than the original one. After a second operation, repullulation is more prompt than after a first. He has never known reproduction to be postponed longer than two years, while in the great majority of instances he has found it to happen in six months.

PART III.—OF CANCER OF PARTICULAR ORGANS, IN RELATION TO THE RESULTS OF SURGICAL OPERATIONS.

In drawing up this report, I have deemed it my duty to speak of carcinoma as it occurs in particular parts of the body, with a view of exhibiting the results of operations performed for its relief or permanent cure. Such a course was absolutely indispensable, as it would have been impossible without it to determine whether the disease is more amenable to this mode of treatment in some structures, or situations, than in others. A careful perusal of this portion of the labours of the Committee will show that there is no difference in this respect, but that true cancer is equally incurable, no matter how early or how thoroughly it may be removed, in whatever organ or tissue it is located. It will be perceived that a very large part of this branch of the subject is devoted to carcinoma of the breast; a circumstance which will not appear singular, when it is remembered that this organ, from its prominent position, and its remarkable liability to this disease, has been, from time immemorial, the seat of constant operation.

SECT. I.—CANCER OF THE BREAST.

Cancer of this organ occurs chiefly under two varieties of form, the scirrhous and encephaloid. Of these, the first is doubtless by far the more frequent, especially as a primary affection. Colloid and melanosis are exceedingly uncommon, and have hardly received any notice as distinct maladies of this gland.

§ 1. VIEWS OF HIPPOCRATES, CELSUS, AND OTHER ANCIENT AUTHORS.

It is not a little surprising that the excision of cancerous tumours should have been interdicted by Hippocrates, who practised at an

age and in a country in which complaints of this kind might naturally be supposed to have been uncommon. The fact that he did clearly shows that his knowledge of the disease and of the results of operative interference must have been much more extensive than surgeons seem willing to admit. The precise language of Hippocrates, as rendered by Dr. Francis Adams, in his learned edition of the genuine work of the *Father of Medicine*, is as follows: "It is better not to apply any treatment in cases of occult cancer; for if treated, the patients die quickly; but if not treated, they hold out for a long time."*

In the time of Celsus, practitioners were in the habit of removing cancerous tumours, especially those of the mamma and face, with the knife, the actual cautery, and escharotics. None of these methods, however, as this writer explicitly declares, were attended with any benefit, since the disease nearly always returned, even after the formation of a cicatrice, and conducted the patient more rapidly to a fatal issue than if no operation had been performed. Notwithstanding this, Celsus was in favour of a resort to these measures in the incipient stage of the malady; but, in its more aggravated forms, he thought the physician should content himself with soothing and palliative remedies.†

Leonidas,‡ of Alexandria, was the first to recommend indiscriminate amputation of the breast for cancer. The only case which, in his judgment, contra-indicates the operation, is where the whole organ is involved in the disease, and where it is so firmly adherent to the walls of the chest as to render it impossible to detach it without compromising the life of the patient. We have no account of the results of his experience; nor, indeed, does it seem certain that he himself ever performed the operation which he so strongly recommends.

Antyllus,§ it would seem, once amputated a cancerous breast; but, although the woman recovered from the immediate effects of the operation, she was attacked some time after with carcinoma in the other gland, which caused her death.

* The Genuine Works of Hippocrates, translated from the Greek, by Francis Adams, LL. D. vol. ii. 758, London, 1842.

† Lib. 5, cap. 18, § 2, p. 186; Sprengel, Histoire de la Médecine, t. vii. p. 422, Paris, 1832. It is due to this writer to state that I have derived much aid from him, in respect to the authorities cited in this part of my report.

‡ Ætius, Tetrab. c. 45, p. 611; c. 50, p. 618. Sprengel, *op. cit.* p. 423.

§ Rhazes, Continens. lib. 13, c. 2, fol. 257.

Paul,* of Ægineta, was fully aware of the repullulating tendency of cancer of the breast. He expresses himself an advocate of the operation of Galen, and also recommends a method of his own, which, however, he rarely, if ever, practised in genuine cancer of this organ.

Rhazes,† who, as has been already stated, flourished in the latter part of the ninth and the commencement of the tenth centuries, thought that, although cancer might occasionally, in its incipiency, yield to internal remedies, yet that when it had advanced to ulceration the only means of safety for the patient was extirpation. He advised that the operation should be executed with the greatest possible care; and, in order to guard against relapse, he enjoined that the knife should be carried not only through the healthy textures, but that it should include all the enlarged veins in the neighbourhood. The mamma having been thus removed, the surface of the wound was immediately burnt with the redhot iron, when means were resorted to for promoting the speedy detachment of the slough. Rhazes does not inform his readers of the result of this kind of practice.

Albucasis,‡ the countryman of Rhazes, and who practised a hundred years later than that distinguished physician, doubted the propriety of operative interference in all cancerous tumours, asserting that he never cured or saw cured, a solitary instance of that implacable malady by this or any other remedy.

Abu'l Kasem,§ another Arabian, recommends a resort to the knife, but explicitly states that he has no confidence in it, because he had never seen a single cure achieved by it, either in his own hands or in those of other practitioners.

From the twelfth until near the middle of the eighteenth century, little success seems to have attended the removal of the mammary gland on account of carcinomatous disease. If a permanent cure occasionally followed, it was regarded as an exception to a general law, which deterred many practitioners from intermeddling with this complaint in any of its stages. A relapse was but too sure to take place, whatever method of procedure was employed, whether the knife, the ligature, the actual cautery, or escharotics.

* Opera, lib. 6, cap. 45, p. 192.

† Continens. lib. 13, cap. 2, fol. 256. Sprengel, *op. cit.* t. viii. p. 425.

‡ Miller's Principles of Surgery, p. 29, Am. ed. 1845.

§ Chirurgia, lib. 1, § 50, p. 96; Sprengel, *op cit.* t. vii. p. 427.

John Tagault,* who published a treatise on surgery about the middle of the sixteenth century, absolutely repudiates all operative interference in cancer of the mamma. Amatus Lusitanus† was also averse both to extirpation and the actual cautery. He cites a great number of cases where, by palliative treatment, the cancers were kept in check for a long time, but which became speedily covered with frightful ulcers, and occasioned death when they were treated with the hot iron, or caustic applications. Ehrenfried Hagedorne‡ saw several cases of relapse after operation; a circumstance which made such an impression upon his contemporaries that many were deterred from having recourse to it. De la Motte§ had no confidence in the operation. Triller,‖ Professor of Surgery at Wittenberg, was in favour of interfering at a very early stage of the disease; but discouraged the operation in cases of long-standing, being satisfied, from ample experience, that relapse under such circumstances is inevitable.

Fabricius Hildanus,¶ on the other hand, was in favour of amputation, and he refers to several examples in which the procedure was crowned with complete success. Nicholas Tulp** shows that extirpation is the only means by which the patient can be saved. Francis Ellain and Denys Guérin, two writers on cancer at the commencement of the seventeenth century, declare that the malady is incurable by any other remedy than excision. J. B. Denis affirms that he saw a surgeon, named Raulin, amputate several cancerous breasts with success. D. Van de Sterre and John Muys relate several successful examples. Dionis expresses himself favourable to the operation; and Ledran thinks that it affords the only resource in this disease. In 1739, C. N. le Cat†† wrote a prize memoir in which he attempted to establish, as a general proposition, the propriety of amputating in all cases of cancer, even when apparently of the most desperate character. He considered that the bad success of the operation was dependent, mainly, upon a want of care in approximating the edges of the wound, thus favouring suppuration

* Instit. Chirurg. lib. 1, cap. 15, 1555.
† Curat. Med. cent. i. p. 62—cent. iii. p. 245.
‡ Obs. et Hist. Med. Pract. Frankof et Lips. 1698
§ Traité Complete de Chirurgie, t. i. ob. 112, p. 5.
‖ De Nociva Cancri Inveter. Extirp. Viteb. 1752.
¶ Cent. 1, obs. 89, p. 69; Sprengel, *op. cit.* t. viii. p. 436.
** Obs. Med. lib. 1, cap. 33, p. 97.
†† Haller, Biblioth. Chir. vol. ii. p. 176.

instead of union by the first intention. He also insisted upon the importance of saving as much integument as possible. Repullulation was to be apprehended only when the cancer adhered to the sternum. John Louis Petit* was in the habit of operating for cancer of the mammary gland; and he was one of the first, if, indeed, not the first, to include in his incisions all enlarged axillary ganglions; a practice adopted by all modern surgeons.

§ 2. VIEWS OF AMERICAN AUTHORS AND PRACTITIONERS.

The late Professor Dorsey,† of Philadelphia, who wrote the first systematic work on surgery that this country has produced, expresses himself as an advocate for an early resort to the knife, before the cancerous poison is absolutely formed, and the neighbouring parts are contaminated. The operation is most likely to eventuate favourably when the morbid growth can be completely eradicated; when the malady arises from accident, and not spontaneously; when the general health is good; and when cancer is tardy in its progress, and does not involve the circumjacent structures.

Professor Gibson says: "Under favourable circumstances, the operation very frequently succeeds perfectly, and the patient never has the slightest return of the complaint; it must not be concealed, however, that it often returns very unexpectedly, and advances with wonderful rapidity, and in a way plainly to show that the knife has not only not eradicated the disease, but hastened its progress." He avers, positively, that whenever the lymphatic ganglions are much enlarged, and of stony hardness, the operation never succeeds.‡

Dr. Gibson does not agree with some modern surgeons that extirpation of the mamma is never successful under any circumstances. He refers, as a proof of the truth of his statement, to the case of a lady in Maryland, upon whom he had operated thirty years ago, and who was still alive at the time he wrote his work. He has also met with several other examples, where ten, fifteen, and twenty years have elapsed without a return of the malady.§

The late Dr. Physick, it would seem, occasionally extirpated the mammary gland when there was enlargement of the lymphatic ganglions, although he was opposed to the practice as a general rule.

* Traité des Maladies Chirurgicales, t. i. p. 223.

† Elements of Surgery, vol. i. p. 393, 1813.

‡ Institutes of Surgery, vol. i. p. 176, seventh edition, Phila. 1845.

§ *Op. cit.* vol. i. p. 177.

In some of his cases, the malady returned after the operation; but in a few, he had the satisfaction to believe that life had been prolonged by it, his patients having remained free from all disease for several years.* In one of his cases the tumour was ulcerated, and yet the woman enjoyed an immunity from the disease for nine years after its extirpation. At the end of this time, several hard lumps showed themselves at the cicatrice, and death occurred in a few months after.†

The views of the late Dr. Joseph Parrish, of Philadelphia, upon this subject, are entitled to great respect, both because he was a close observer, and because he was in the habit of recording what he saw with scrupulous fidelity. After considerable experience and observation, he confesses that he was much discouraged as to the final success of all operations in cancerous diseases of the mammary gland.‡ He never resorted to the knife in any case where the affection had invaded the axillary ganglions or fixed itself upon the parts beneath the breast, except at the particular request of the patient, with a full explanation of his conviction of the probable inefficiency of the remedy. When the organ alone was involved, he advised the operation, but even here he regarded it as affording only a doubtful prospect of escape; he was never disappointed in finding the disease return, and finally carrying off his patient. He repeatedly saw the cicatrice removed by a second operation; but never with final success. He considered cancer to be essentially a constitutional affection, and doubted whether it ever arose purely from external injury. He had never witnessed any cases of cure from low diet, depletion, and an avoidance of exciting causes. He had been led to believe that many of the cases of cure reported in medical journals had not been examples of cancerous, but of ordinary maladies, rendered suspicious by their alarming appearance, or by the obstinacy with which they resisted various therapeutic remedies.

There was one form of cancerous disease of the breast which Dr. Parrish regarded as particularly malignant, and to which, it would seem, his attention was first directed by the late Dr. Physick. This was a peculiar granulated condition of the surface of the affected gland, imparting to the finger the sensation as if it were filled with small shot. Dr. Physick considered this as the most dangerous form

* Dorsey's Elements of Surgery, vol. i. p. 393, Phila. 1813.

† Mussey, Transactions Amer. Med. Association, vol. iii. p. 336.

‡ North American Med. and Surg. Journ. vol. vi. p. 300, Philadelphia, 1828.

of the malady, in which he never knew an operation to prove ultimately successful. The experience of Dr. Parrish fully coincided with that of the "Father of American Surgery." "I once operated," says he, "upon such a case in the Pennsylvania Hospital. The disease was confined altogether to the breast, and, as far as could be ascertained by the sight or the touch, was entirely removed. The wound healed kindly, and for a short time the patient appeared comfortable; but in a few months the complaint returned, and soon terminated fatally."*

The late Dr. J. Kearney Rodgers, of New York, one of the ablest and most enlightened surgeons our country has ever produced, and who died only as it were yesterday, was induced, at an early period of his professional career, both from personal examination and from correspondence and intercourse with many of the most distinguished men at home and abroad, to take strong and decided ground against operative interference in cases of cancer of the mamma. In a conversation which I had with him on the subject, only a few months before his lamented death, he expressed himself in the most unqualified manner, declaring that his experience, even under the most propitious circumstances, was adverse to ablation, and condemning, in the most pointed manner, the reckless conduct of the so-called knives-men, both in this country and in Europe. His conviction, based upon an extensive and well-observed practice of thirty years, was clear and positive that excision was useless even as a means of prolonging life, while, as a curative agent, it had utterly failed in every instance that had fallen under his eye. He had his doubts even whether, in genuine cancer of this organ, the operation was ever justifiable in any case.

The results of the operations of Professor B. W. Dudley, of Lexington, have been eminently discouraging; for it would seem that he never removed a scirrhous breast without a recurrence of the disease. He states that he has witnessed the healing of a carcinomatous ulcer, as large as a man's hand, within a month, under the influence of a fervid imagination, when all of a sudden, just as the last point was expected to cicatrize, the force of the imagination gave way, the ulcer reopened, and the patient died in a few weeks. He has checked the morbid action for several years by severe abstinence, but has never seen it cured.†

* *Op. cit.* vol. vi. p. 295.

† Transactions Amer. Med. Association, vol. iii. p. 331.

The late Dr. Twitchell, of New Hampshire, extirpated the mammary gland in a good many instances, on account of scirrhous disease. In almost all there was a reproduction of malignant action in some other part of the system, carrying off the patient. In a few cases only, where a most rigid dict, excluding oils and sugar, was perseveringly observed, was there an immunity from relapse.*

Dr. W. L. Atlee, of Philadelphia, has met with an instance in which he operated in March, 1843, and where there was no return of the malady at the end of seven years. The patient was eighty-six years of age; the skin was corrugated, ulcerated, and attached to the tumour; the axillary ganglions were unaffected, and the whole breast was removed.†

Dr. Usher Parsons, of Providence, R. I., in his learned *Boylston Prize Dissertation on Cancer of the Breast*, published at Boston in 1839, has this language: "To the patient, then, and to himself, the surgeon must hold up the following propositions: 1. That the extirpation of a scirrhous tumour, whether indolent or painful, large or small, recent or of long-standing, is no positive security against its reappearance, and that the same is true in respect to cancerous degenerations of other tumours and ulcers. 2. That the danger of a return is greatly increased when the disease has been of long-standing, or of rapid progress in its development, or, if ulcerated, and especially if it has affected the axillary glands, or adheres to the subjacent muscles. 3. That there is but little hope of preventing a return by operating after the constitution exhibits marks of cancerous cachexy."

Dr. Parsons says that, in this country, so far as his inquiries had extended at the time he published his essay, the proportion of relapses, after operation, was at least two-thirds. Three years previously, he had stated the proportion of final cures at more than one-half. Farther examination, however, had satisfied him that this estimate was too high. It is to be regretted that Dr. Parsons has not accompanied his paper with the data upon which he has founded this singularly exaggerated statement respecting an operation, the final issue of which is so generally unfavourable as to have become a reproach to the profession.

Professor Knight, of New-Haven,‡ has frequently extirpated the breast for scirrhous disease. He thinks himself authorized to state

* Mussey's Report, Trans. American Med. Association, vol. iii. p. 334.

† *Op. cit.* vol. iii. p. 334.

‡ *Op. cit.* vol. iii. p. 335.

that, in all cases in which there was lymphatic invasion, or enlargement of the axillary ganglions, there was a recurrence of the carcinomatous action, either in some of the neighbouring structures or in some internal organ, thereby destroying life. In those cases, on the contrary, in which the malady was of comparatively slow growth, and without any involvement of the circumjacent parts, the operation was occasionally successful, in the proportion, probably, of about one in four or five. In a few instances, a tumour appeared in the cicatrice, or in its immediate neighbourhood, and was removed with a favourable result. In one case he extirpated four such lumps, which had appeared successively at intervals of about a year, from an old lady, who survived the second operation eighteen years, and died at the age of ninety-five.

Dr. Knight is of opinion that in many of the cases of scirrhus of the mamma, in which the malady returned after extirpation, the operation had the effect of prolonging life for a considerable period. This is not true, however, of soft cancer, the encephaloid, cerebriform, or fungoid disease of authors, in which there was invariably a relapse, augmenting the patient's suffering, and causing death sooner than if no operation had been performed.

The experience of Professor Mussey, in cancerous diseases of the mammary gland, is anything but encouraging as it respects operation; for in all his cases, except two, in which he has been able to ascertain the results, there has been a return of the morbid action in some part of the system within four years, and in most of them within twelve months. In the two exceptional cases, there was no involvement of the nipple, areola, skin, or axillary ganglions; and the tumour, although hard, sometimes painful, and occupying the whole organ, was not adherent at its base. One of the patients was forty years of age, and was entirely well ten years after the operation; the other was under thirty, and in good health eight years after. Dr. Mussey observes, with reference to these cases, that if they were malignant, they were obviously not the most so. "He has but little to boast of from his own experience in this operation."*

Professor Eve, of the Nashville University, informs me that the results of his operations upon cancerous breasts have been eminently unfavourable; for he does not know of a solitary instance in which the malady did not return and terminate fatally, where the diagnosis was unequivocal.

* *Op. cit.* p. 333.

Professor Pope, of St. Louis, in a letter to me, dated July, 1851, states that he had removed the female breast in a dozen instances for supposed malignant affections. Some of his patients had died, some had had no return of the malady, and of the rest he was unable to learn the history after they had left his hands.

Dr. Traill Green, of Easton, Pennsylvania, formerly Professor of Chemistry at Washington College, in that State, has communicated to me the following interesting case of cancer of the mamma. The patient was fifty years of age, of sanguine temperament, and still menstruating; the tumour, for which no cause could be assigned, was five inches in length by four in breadth, irregular on the surface, free from adhesions to the subjacent parts, and unaccompanied with retraction of the nipple, disease of the axillary ganglions, or change of structure in the skin. The general health was perfect. The whole gland was removed with the knife, together with an elliptical portion of the skin, about an inch and a half in width. Four months afterwards, the cancer returned in the integuments and was again excised. Another relapse took place in two months; and, notwithstanding the use of constitutional remedies and the application of caustics to the parts, the woman expired twenty-two months and a half after the first operation. The morbid products were examined by the microscope, and exhibited the characteristic cancer-structure.

Dr. Green states that he once knew a female who had a small tumour in one of her mammæ, which another practitioner, who saw the case with him, supposed to be carcinomatous, but which gradually disappeared without any particular medication. The individual is now living and in good health, beyond the menstrual period. In another case, a surgeon endeavoured to persuade a woman to permit him to remove her breast, which he represented to be in a cancerous condition. She declined the operation, and is now in excellent health, the gland secreting good milk for an infant born not long ago. Had these cases been subjected to operation, they would have been pronounced as successful cures.

In November, 1843, Dr. Joshua B. Flint, of Louisville, removed a fungous tumour from the right breast of a lady, aged twenty-five years; the disease having existed several months, and exhibited all the characteristic features of that heteroclite deposit. In consequence of a puncture made a week previously, a growth, half as large as a fist, protruded through the skin, and was the seat of frequent and exhausting hemorrhages, threatening a rapidly fatal termination. The integuments being so extensively involved, a portion

of the wound had to heal by granulations, which several times assumed a suspicious appearance; but the parts finally cicatrized under the use of tonics and simple dressings, and a complete recovery followed, the patient remaining well in April, 1850, and having, in the mean time, given birth to two healthy children. It is stated that the morbid product exhibited, under the microscope, the characteristic structure of fungus hæmatodes.*

The annexed tables have been obligingly prepared for me by my friend Dr. J. Rowan Pirtle, of this city. The first comprises eighteen cases of scirrhus, collected from various sources, and the second twenty-nine cases, transferred from M. Canquoin's *Treatise on Cancer*.

* Transactions of the Amer. Med. Association, vol. iii. p. 337, 1850.

I. *Table of Malignant Diseases of the Mammary Gland.*

No.	Age.	Married.	Temperament.	Residence.	Cause.	Duration.	Progress and symptoms.	Mode of treatment.	Result.	Structure.	Surgeon.	Page and name of work.	Date.	When last seen.
1	50	1		London	Spontaneous	4 y'rs	Slow; axillary glands enlarged.	Excision			Morgan	187 Lancet	April, 1826	
2	44	1		"	"	1 y'r	Slow; not painful.	"		Scirrhous	B. Cooper	91 "	1826	
3	60	1		"	Blow	1 y'r	Painful; ulcerated.	"		"	Wardrop	622 "	Jan. 1827	3d day.
4	40	1		"		2 y'rs	Slow; painful; nipple retracted; axilla involved.	"		"	B. Cooper	831 "	Sept. 1827	
5	49	1		"		7 y'rs	Slow; ulcerated and painful.	"		"	Wardrop	286 "	June, 1827	4th day.
6	68	1	Sanguine	"	Blow	2 y'rs	Painful and slow; ulcerated.	"		Hard	Morgan	800 "	Aug. 1827	10th day.
7	56	1	Nervo-bilious.	"		1 y'r	Slow and very painful; axilla involved.	"	Apparent cure	Scirrhous	L. Ray	282 "	Sept. 1828	2 months.
8	45	1	Sanguine	"		18 mo's	Painful.	"				735 "	July, 1828	
9	45			"		2 y'rs		"		"		765 "	Sept. 1829	
10	42	1	Nervo-bilious.	"		5 mo's	Painful.	"		"	Morgan	573 "	July, 1827	
11	47	1		"		8 mo's	Nipple retracted; painful.	"	Fatal	"	Scott	30 "	March, 1832	Died 3d d'y.
12	42	1		"		2 y'rs	Slow; axilla involved.	"		"	Stanley	286 "	June, 1832	
13	45	1	Nervous	"		9 mo's	Painful; rapid; axilla involved.	"		"	Lawrence	444 "	Dec. 1832	
14	47	1	Nervous	"	Blow	2 yr's	Slow; rapid; latterly painful; nipple retracted.	"	Apparent cure	"	Lynn	421 "	Sept. 1833	2 weeks.
15	44	1		"		2 yr's	Slow; ulcerated.	"	"	"	Martinet	154 "	March, 1830	2 years.
16	29	1		"	Blow	3 yr's	Slow; hectic fever.	"		"	Martinet	155 "		3 years.
17	43			"		1 y'r	Slow.	"		"	Lloyd	794 "	Sept. 1835	
18	41	1	Nervous	"		1 y'r	Slow.	"		"	Luke	374 "	1849	

II. *Table of Malignant Diseases of the Mammary Gland.*—Cases translated from the work of Dr. A. CANQUOIN, of Paris.

No.	Age.	Married.	Single.	Temperament.	Residence.	Cause.	Duration.	Progress and symptoms.	Mode of treatment.	Result.	Structure.	Page and name of work.	Surgeon.	Date.	When last seen.
1	58	1		Sanguino.	Paris.	Spontaneous	1 year	Gradual; lancinating pains.	Vienna paste and chloride of zinc.	Cure	Scirrhous; fibro-cartilaginous; size of the feet.	123 Traitement du Cancer. par le Docteur Canquoin.	Cauquoiu	Nov. 1837	March, 1838.
2	56	1			France.		3 years	Reappeared after excision and ulcerated; system involved.	Vienna paste and chloride of zinc; tonics interually.	"	Five inches in diameter.	126 Cauquoin.	"	June, 1835	Died in next y'r.
3	46	1			Paris.	Blow	1 year	Slow.	Internal; local.	Resolution	Hard; size of egg.	211 "	"	March, 1835	1 year.
4	30		1		"	Blow	$1\frac{1}{2}$ year	Slow and painful.	Internal, saturnine, cataplasms, &c.	"	Size of turkey egg.	212 "	"	Oct. 1835	
5	36	1			"	Spontaneous	$2\frac{1}{2}$ y'rs	Gradual and painful; axilla tender; both mammæ.	Emollient and other applications & tonics internally.	"	Both tumours size of a goose egg.	213 "	"	Sept. 1837	
6	38		1	Nervo-sanguine.	"	Blow	8 years	Painful; system undermined.	Interual and emollieut.	Partial resolution.		219 "	"	Sept. 1837	
7	30	1			"		2 years	Painful; axilla involved as well as mammæ of both sides.		Resolution	Firm.	220 "	"	Nov. 1837	4 mo's.
8	41	1			"		9 years	Painful; slow.	Cataplasms, &c.	"	Very hard.	222 "	"	Oct. 1836	5 mo's.
9	50	1			"		13 y'rs	Both mammæ.	Customary treatment.	"	Fibro-cartilaginous; scirrhous.	225 "	"	Feb. 1837	
10	43	1			"		3 years	No pain; slow.	Customary treatment.	"	Hard; size of walnut	226 "	"	July, 1837	
11	39	1		Nervo-sanguine.	"		6 mo's	Painful; axilla tender.	Customary treatmeut.	"	Size of pigeon's egg.	227 "	"	April, 1837	
12	60	1		Lymphatico-sanguine.	"		1 year	Slow; lauciuating pain.	Vienna paste.	Failure	Scirrhous.	229	"	August, 1837	
13	71	1		Sanguine.	"		6 years	Slow; painful; ulcerated.	Chloride of zinc.	Cure	Scirrhous.	234 "	"	March, 1836	2 years.
14	27		1	Lymphatic.	"		4 years	Ulcerated; painful; axilla involved.	Vienna paste and chloride of zinc.	"	Scirrhous.	236 "	"	July, 1836	$1\frac{1}{2}$ year.
15	63	1		Sanguine.	"		3 years	Painful; ulcerated; strength depreciated.	Cataplasms, Vienna paste, chlor. zinc, nitrate silver.	"	Hard.	238 "		Oct. 1836	16 mo's.
16	42	1		Bilioso-sanguine.	"	Blow	3 years	Painful; ulcerated; adherent to pectoral muscle.	Vieuna paste, chloride of zinc, &c.; internals.	"	Scirrhous.	241 "	"	March, 1837	1 year.
17	48	1			"		3 years	Painful; axilla involved in swelling.	Vienna paste and internal treatment.	"	Encysted, scirrhous and encephaloid.	244 "	"	Feb. 1838	
18	41	1		Lymphatico-sanguine.	"	Blow	10 mo's	Paiuful, and skin inflamed.	Vieuna paste, &c.	"	Very hard.	246 "	"	Jan. 1837	
19	68	1			"		6 years	Ulcerated; axillary ganglia swollen.	Caustie.	"		248 "	"	Dec. 1836	1 year.
20	39	1		Nervo-sanguine.	Frauce.		4 years	Reappeared after amputation by Lisfranc; adhering.	Vienna paste, chloride of zinc, &c.	Partial cure	Scirrhous.	251 "	"	March, 1837	
21	36	1		Sanguine.	Paris.		2 years	Ulcerated; painful.	Cataplasms, &c.	Resolution	Scirrhous.	255 "	"	May. 1837	
22	45	1			France.			Reappeared after amputation; ulcerated; painful.	Emollient, &c.	Failure	Scirrhous.	258 "	"	March, 1836	
23	45	1			"				Vienna paste.	"		259 "	"	March, 1836	
24	56	1		Sanguiue.	Paris.		10 yr's	Slow; axilla swollen; adherent to muscle; painful.	Vieuna paste.	Cure	Fibro-cartilaginous.	260 "	"	Sept. 1837	1 year.
25	60	1		Sanguine.	"			Ulcerated; painful.	Vienna paste.	Par'l eure	Scirrhous.	263 "	"	August, 1836	
26	36	1		Sanguine.	"				Caustie.	"	Fibro-cartilagiuous.	269 "	"	April, 1836	
27	48	1			"		2 years	Adherent and ulcerated.	Vienna paste.	Cure		271 "	"	April, 1837	
28	56	1			"		2 years	Reappeared after excision.	Vienna paste; chlor. zinc.	"	Scirrhous.	272 "	"	Juue, 1837	1 year.
29		1			"			Reappeared after oxcision.	Vienua paste.	"	Scirrhous.		"	1835	3 years.

§ 3. VIEWS OF ENGLISH AUTHORS AND PRACTITIONERS.

Dr. Alexander Monro,* Primus, Professor of Anatomy in the University of Edinburgh, in 1742, asked the question, whether cancerous tumours, when they cannot be resolved, ought to be extirpated, or be treated merely palliatively? The subject had evidently engaged much of his attention, and he was anxious to obtain from his professional brethren, in every part of Europe, an expression of their views respecting it. At the time he wrote, he had witnessed nearly sixty cases of cancer, in which the tumour had been removed with the knife, and of these four only remained free from the disease at the end of two years. Of these "lucky people," as he quaintly styles them, three had occult cancer of the breast, and the other had an ulcerated cancer of the lip. He observed that, when the disease relapsed, it was more violent and more rapid in its progress than it was in those persons who had not undergone any operation. It is proper to state that, in Dr. Monro's time, the wound made in the operation, instead of being united by the first intention, was allowed to heal, if it would heal at all, by the granulating process. It would seem that this gentleman was in the habit, in his own cases, of directing that the sore, when reduced to the size of the palm of the hand, should be kept open as an issue during the remainder of life!†

Dr. Monro was of the opinion that it was proper to operate in ulcerated cancer, attended with rapid wasting of the patient, as the only means of prolonging life. He also thought that in an occult cancer, occurring in a young healthy person, as a consequence of a bruise or hurt, the hope of preventing a relapse should induce the surgeon to have recourse to the knife.

Diametrically opposed to the result of the experience of the Edinburgh professor is the observation of the late Mr. James Hill, an eminent surgeon of Dumfries, Scotland, and the author of a work entitled *Cases in Surgery, particularly of Cancers, and Disorders of the Head from External Violence*, issued at Edinburgh in 1772. At the time of the publication of this work, Mr. Hill had extirpated, from different parts of the body, not less than eighty-eight cancers, all of which, except four, were in an ulcerated condition. He regarded the disease, in every instance, as of a genuine

* Edinburgh Medical Essays, vol. v. p. 421, 1742.

† Johnson's Practical Essay on Cancer, p. 110, Phila. edition, 1811.

character, and he assures the public that all the patients but two recovered from the effects of the operation.

Mr. Hill groups his cases under two heads; the first embracing forty-five, and the second thirty-three cases. Of the former, only one proved unsuccessful, meaning, I presume, that the patient died from the immediate effects of the operation. In three of the cases, the disease afterwards appeared in different parts of the body; and in another, the woman was threatened with some tumours at a distance from the original cancer; but not till three years after the excision, when she died of fever. All the rest of the patients continued well as long as they lived, or up to the time of the publication of Mr. Hill's work. One survived eleven, and another thirty years.

Of the thirty-three cases forming the second group, one lived only four months, and in five others the cancer broke out again. Mr. Hill endeavours to account for the greater fatality of these cases by stating that his previous extraordinary success induced patients to flock to him from all parts of the country, compelling him, often against his inclination and judgment, to operate when there was but little probability of success.

Up to April, 1764, after a practice of thirty years, he had cured sixty-three patients, of whom thirty-nine were alive and sound at that date. In twenty-eight of this number, the operation had been performed more than two years; in the rest, less than two years. The remaining twenty-five, which complete the eighty-eight, were operated upon after the year 1764, and of these, twenty-two were well at least two years.

In July, 1770, when he had eighty-eight cases, two were not cured; in nine, the disease broke out afresh, and in one a relapse was threatened; forming less than a seventh part of the entire number. At that time, forty patients were alive and sound, whose cancers had been extirpated above two years.

The results of the operations of the late Mr. Nooth,* of England, seem to have been still more favourable than those of Mr. Hill. His experience, based upon an extensive practice of thirty years, justifies him, he says, in declaring that only one in thirty of his patients ever had any return of the disease, in any form whatever, after extirpation of the mammary gland. The number of cases reported by him amounts to one hundred and forty-six, and of this five only were unsuccessful!

* Observations on the Treatment of Scirrhous Tumours of the Breast, p. 37, second edition, 1806.

Mr. Benjamin Bell,* of Edinburgh, who published his celebrated *System of Surgery* towards the latter part of the last century, considers that cancer of the breast, on its first appearance, is, perhaps, in every instance, merely a local affection; that the carcinomatous diathesis is produced, not by any original disease of the constitution, but by absorption of the poison from the parts primarily implicated; and that, therefore, every such malady should be immediately removed by amputation, whenever this is practicable. This, he thinks, ought to be an established maxim in the treatment of all cases of cancer wherever it may be situated, but particularly when it occurs in the mammary gland. "When practitioners, therefore," says he, "have an opportunity of amputating cancerous or scirrhous breasts early, they ought always to embrace it. It often happens, however, from an improper delicacy in patients, as well as from other causes, that practitioners are not consulted till the disease is far advanced. But although the advantages to be derived from the operation will in general be in proportion to the previous duration of the disease, yet, on all occasions, even in very advanced stages of cancer, it is right to advise it, provided the parts affected can be completely removed." It may be added that Mr. Bell expresses full confidence in the statements of Mr. Hill, of Dumfries, in regard to the results of his operations for malignant disease of the breast.

Mr. James Latta,† an Edinburgh surgeon, and the author of *A Practical System of Surgery*, published at Edinburgh in 1795, was a decided advocate of early excision in cancerous disease of the mamma. Like his countryman, Mr. Benjamin Bell, he thought that the complaint was often of a local nature, and that, therefore, a radical cure might reasonably be expected, especially when there is no lymphatic invasion, ulceration, or adhesion of the tumour to the circumjacent parts, or great impairment of the general health; in which case, no operative interference whatever would be justifiable.

Sir Everard Home relates‡ the particulars of twenty-two cases of cancer of the breast, of which eight were permitted to run their course unmolested. Of the remaining fourteen that were operated on, only five proved completely successful.

The late Mr. Robert Allan, of Edinburgh, the author of an ex-

* Vol. ii. p. 437-40, third edition, Edinburgh, 1787.

† Vol. ii. p. 510.

‡ Observations on Cancer, London, 1805.

cellent system of surgery in its day,* states that, upon taking a review of the cases of cancer in which he was concerned, either as the operator or as the assistant of Mr. John Bell, and which, at the time he wrote his work, amounted to a considerable number, he finds that in the spontaneous form of the disease, occurring in the female breast about the forty-fifth year, at the cessation of the menses, there was a return of the affection, either at the original site or in some other part, in at least two-thirds of the patients, although the knife was employed before the lesion had made much progress. This result, so unfavourable, led him to adopt the opinion of Monro, already cited, respecting the futility of operative interference. Mr. Allan thinks that the prospect is generally better, all other things being equal, in cancer of local than in cancer of constitutional origin. "In the former," says he, "the malady is slow in its progress, and, if removed early, there is usually no reproduction; whereas, in the latter, it is rapid in its march, and often reappears after excision."

The character of the late Mr. Henry Park, of Liverpool, as an able, experienced, and scientific surgeon, is well known to the American profession. Few English practitioners have stood higher in their day in the estimation of their brethren; and hence a brief reference to his opinion upon the subject before us will be particularly appropriate on this occasion. His views of the excision of carcinomatous tumours deserve to be recorded as the result of an enlarged experience and the most careful observation. In the *Memoir of his Life*, by his daughter,† it is explicitly stated that he had no confidence in the cure of cancer by the use of the knife. After extirpation of the mammary gland, he had so frequently seen the disease show itself in the other breast that he was led to doubt whether recovery ever takes place in the genuine form of the complaint. It seems that he had met with no less than eight cases of carcinomatous breasts, condemned as incurable, except by operation, by the surgeons of London, Edinburgh, and Dublin, which all recovered under palliative treatment, without amputation. They had been originally under his care, and afterwards returned to him to receive farther advice and attention. The disease was, of course, not carcinomatous in any instance; at all events, it was not so regarded by Mr. Park.

About fifteen years ago, namely, in 1838, a very able and learned paper on the treatment of carcinoma of the mamma was published

* A System of Pathological and Operative Surgery, vol. i. p. 244, Edinb. 1821.

† Transactions of the Provincial Medical and Surgical Association, vol. vii. p. 479.

by Dr. John Macfarlane, of the Royal Infirmary of Glasgow, from which it appears that, of thirty-two cases of this kind operated upon by this distinguished surgeon, the cure was not permanent in a single one. The ages of his patients varied from forty-two to fifty-nine; twenty-three were married, and had children; the rest were unmarried. In twenty-two the entire gland was affected; and in ten the disease existed as a tubercle. In twenty, the axillary ganglions were involved, though not extensively, and were removed in the operation. In the other twelve, no derangement could be detected in these structures. In nine cases, the cancer returned in the integuments of the chest, or in the axilla, at a period varying from six weeks to three months after the excision; in thirteen cases, from three to nine months; in four, from nine to twelve months; in three, within two years; and in one, near the end of the third year. In two of the cases, the operation proved fatal; in one, from pleurisy; and in the other from erysipelas.*

Besides these examples, Dr. Macfarlane ascertained, on inquiry among his friends, the results of eighty-six additional cases, in which this organ was extirpated for well-marked carcinoma, and in not one of these was the cure permanent. In the majority, the operation was performed at an early period, and under, apparently, the most favourable circumstances; the affected parts were thoroughly removed, and in many there was no distinct evidence of constitutional deterioration; and yet in every one the disease returned, both externally and internally, and proved fatal.

There is no writer in the English language whose works have been received with more confidence and respect by the physicians and surgeons of the United States than those of Sir Benjamin C. Brodie. They bear, throughout, the impress of an honest mind, great judgment, rare originality, and uncommon practical acumen; and his opinions are, therefore, entitled to much weight, especially upon the subject under consideration, which has evidently engaged much of his attention.

The cases in which Mr. Brodie† thinks an operation for the removal of a cancerous breast proper, are, first, where there is no disease of the skin; secondly, where the nipple is not retracted; thirdly, where there is no adhesion of the organ to the surrounding

* London Medical Gazette, June 2, 1838; Amer. Journ. Med. Sciences, vol. xxiii. p. 219.

† Select Surgical Works, p. 214, Phila. 1847.

parts; fourthly, where there is no enlargement of the axillary ganglions; fifthly, where the patient is not very far advanced in life; and, lastly, where there is no sign of internal mischief. Sir Benjamin states that he does not intend to say that in these excepted cases there will be a permanent cure; but he declares that this will happen occasionally, and he adds that the chance of the occurrence is sufficient to warrant a resort to the knife. He recollects several persons from whom, under the above circumstances, he removed the mammary gland, and who are now alive and well many years after the operation, but who would have died long since had the disease been permitted to pursue its own course.

He is also of opinion that an operation is proper under other circumstances. A hard scirrhous tumour, for example, occasionally forms on the surface of the breast, but unconnected with its structure, except at one narrow corner. He has operated successfully in cases of this description, without extirpating the gland itself. Again, a scirrhous tumour sometimes originates in the nipple, subverting its structure, without seriously involving the mamma itself. In one case of this kind, in which the whole breast, although healthy, was excised, the woman was alive and well many years afterwards. In another instance, that of a large elderly female, with a very large breast, the affected nipple alone was removed with chloride of zinc and caustic paste, and the patient was found to be doing well three or four years afterwards.

Mr. Brodie states that he has occasionally operated merely with a view of prolonging life, and relieving the patient from present suffering. He refers to several cases in which he happily accomplished this object.

He thinks the following circumstances as particularly unfavourable to an operation: retraction of the nipple; ill-defined state of the mamma; a contaminated condition of the skin, as indicated by its brawny, anserine, tuberculated, dimpled, or indurated appearance; implication of the lymphatic ganglions; ulceration of the tumour, or its firm attachment to the integuments, muscles, or ribs; the coexistence of cancer in other parts of the body; and deterioration of the general health.

The late Mr. Liston,* in cancer of the mamma, recommends recourse to the knife as soon as the malignant nature of the tumour is recognized, before it has made much progress, and before it has

* Elements of Surgery, by Gross, pp. 412–13, Phila. 1846.

contracted extensive adhesions, or contaminated the lymphatics. In the latter event, he considers operative interference scarcely justifiable. When enlarged glands are perceptible above the clavicle, or in the intercostal spaces, the practitioner who advises intermeddling with the original tumour must, he says, be grossly ignorant, or very unprincipled. Notwithstanding Mr. Liston encourages a resort to the knife in the early stage of the malady, he distinctly declares that permanent riddance from mammary carcinoma is scarcely to be expected by operation, or any other means. Neither does he consider ablation of medullary and bloody tumours of this gland as more successful in its result; though he adds that he has certainly witnessed permanent cures under unpromising circumstances, as when the tumours were large, of long duration, and even ulcerated.

Mr. Herbert Mayo,* formerly surgeon to the Middlesex Hospital, London, whose writings are well known in this country, states that in amputation of the breast, under the most favourable circumstances, that is, at the earliest possible period after the disease has declared itself, and before there is any invasion of the surrounding structures, the malady will return in ninety-nine cases out of every hundred, either at the cicatrice, or in the adjacent ganglions. When the skin is extensively implicated, the gland firmly adherent, the tumour ulcerated, the lymphatics much engorged, and the general health seriously deranged, the patient would not derive sufficient benefit from the operation to compensate him for the suffering attending it. The time at which the malady recurs after removal of scirrhus ranges from six months to two years, or even longer. The changes which supervene in secondary scirrhus, whether originating at the cicatrice, or elsewhere, are generally mild, compared with the former. The constitution, however, sinks more rapidly on the return of the malady, being by that time more completely undermined than at the first invasion.

Mr. Syme,† of Edinburgh, in speaking of carcinoma of the mammary gland, remarks that it would appear, on the whole, that the prospect of permanent recovery is not so hopeless as it has been represented, provided the operation is performed only in proper cases, and in an efficient manner. Similar diseases, he continues, are removed from other parts of the body, as the lip, with almost

* Outlines of Pathology, p. 573, London, 1836.

† Principles of Surgery, p. 296, Edinb. 1842.

invariable success; but no surgeon thinks of cutting out a cancer of the lip if there be an affection of the glands under the chin.

Mr. Travers,* of London, whose name is so well known in this country by his various writings, especially his treatise on *Constitutional Irritation*, believes that cancer of the mammary gland is "never curable by excision. He thinks that he is safe in saying that of twenty cases which would, twenty years ago, have been operated on by verdict of a consultation, not five, or not more, would now be subjected to it by the consent of the surgeons." Generally, when life is prolonged by ablation, without reappearance of external disease, death finally results from visceral invasion. Mr. Travers can recall to mind instances, exceptional ones, of course, of genuine carcinoma, where extirpation was followed by a survival of ten, fifteen, or even twenty years.

Sir Astley Cooper† states that the disease in a large proportion of cases of excision of scirrhous breast returns; but not so frequently as formerly, especially if the patient, immediately after recovering from the operation, is subjected to an alterative course of medicine. He considers that, in the present state of our knowledge, extirpation furnishes the only hope of preventing the malady from proving destructive, with the exception of those cases which occur in advanced age, in which it makes little inroad on the constitution, and little progress in the parts. Although the patient may not ultimately survive, yet it may be said that when the complaint does return the operation, by preventing ulceration, preserves the individual from a most painful and offensive state. "On these accounts," says he, "I recommend the patient to submit to it. Hope is revived, and the only chance for life is given."

In regard to medullary cancer of the breast, Sir Astley Cooper‡ distinctly states that it is less liable to return after extirpation than the scirrhous form of the affection, and he therefore advises an early resort to the knife. The constitution, as after the operation in hard cancer, requires an alterative treatment, to counteract the tendency to relapse.

Mr. Bransby B. Cooper§ is an advocate for extirpation of the scirrhous breast in the earlier and milder forms of the affection; but

* Delafield's Biographical Sketch of J. K. Rodgers, M. D. p. 22, New York, 1852.

† Lectures on Surgery, by Tyrrell, p. 273, Phila. 1835.

‡ *Op. cit.* p. 279.

§ Lectures on the Principles and Practice of Surgery, p. 565, Phila. 1852.

in the more active or advanced cases, the operation, he thinks, is rarely successful, even as a means of prolonging life. Under such circumstances, indeed, he is of opinion that the operation itself is sufficient to create a further development of the malady, and that the matter which is deposited under the attempted restorative inflammation is cacoplastic instead of healthy; thus leading, as a necessary consequence, to a propagation of the morbid action to other parts of the body, quickly followed by a fatal termination. Mr. Cooper alludes to the case of a lady who had a scirrhous tumour in one of her breasts, and who remained quite well for ten years after the operation, when the complaint returned in the cicatrice, and ultimately destroyed her life. In another case, the disease had not reappeared at the end of eight years, though the morbid mass had in this, as in the former instance, every characteristic of the true scirrhous tubercle.

Although this surgeon is averse, as a general rule, to any operative interference when the tumour is in a state of ulceration, yet he seems disposed occasionally, under such circumstances, to recommend a resort to the knife, with a view merely of relieving the excessive pains, and checking the exhausting discharges.

In respect to soft cancer of the mammary gland, Mr. Cooper states that all remedies, even extirpation, are unavailing. He is, however, of opinion that, as the operation removes a great source of constitutional irritation, it ought not to be entirely repudiated, and the patients abandoned to their fate. Soft cancer, he says, requires earlier extirpation than any other form of malignant disease.*

Mr. South, of London, the able editor of *Chelius's Surgery*,† cautions practitioners against advising patients to submit to an operation for a scirrhous tumour of the breast under any circumstances, but especially when it is attended with ulceration or involvement of the neighbouring ganglions. In no instance can a cure be promised; nor can it be affirmed that the person's condition will not be made worse by it. He does not think, as has often been alleged, that an operation will "put off the evil day," or retard the ulcerative process; for he has known many examples to the contrary. The only thing, indeed, which it can do is to afford temporary palliation, when the patient, as is not very frequently the case, is harassed by severe, shooting, stabbing pain, rendering life almost insupportable. In short, he declares that extirpation of a scirrhous breast is, without

* *Op. cit.* p. 573.

† Vol. iii. p. 540, Phila. 1847.

doubt, the most unsatisfactory proceeding in the whole course of surgical practice.

Mr. Birkett, the author of an excellent work on the *Diseases of the Breast and their Treatment*, published in London in 1850, is rather favourably disposed to operation in mammary cancer, especially in its first stage of development, before the tumour has acquired any considerable bulk, while the adjacent structures are still sound, and the general health continues unimpaired. The chance of success diminishes as the disease advances, and in what Mr. Birkett calls the fourth stage of the complaint, characterized by ulceration and other severe symptoms, he considers operative interference inadmissible, even as a means of prolonging life.

§ 4. VIEWS OF FRENCH AUTHORS.

Under this head, I shall content myself with citing the views and recommendations of the leading systematic writers of France during the last fifty years. Of these, one of the most respectable and influential is Baron Boyer, whose celebrated *Traité des Maladies Chirurgicales* was for a long time the principal authority upon the subject in that country, and which will always remain as a monument of the learning and science of that great and excellent surgeon.

The result of the experience of this author* upon this subject strikingly coincides with that of Monro, given in a preceding page. Of upwards of one hundred cases of supposed cancerous tumours of the mammary gland and other parts of the body, operated upon by him, there were only four or five in which the cure was radical; in all the others the disease recurred after a longer or shorter period, and proved fatal. He is of opinion that ablation is frequently useless and even detrimental, and that, in many of the cases in which it is said to have been followed by permanent relief, the affection was in reality not cancerous, but strictly benign in its character.

The circumstances which, in the judgment of Boyer, justify a resort to the knife, with a prospect of a favourable issue, are, first, the recent standing, small size, entire mobility, and indolent character of the tumour; secondly, where the disease can be traced to some external cause, as a blow, or contusion; thirdly, where the axillary ganglions are not enlarged; and, fourthly, where the patient is young,

* Traité des Maladies Chirurgicales, t. v. p. 585. Cinquième edition, Paris, 1846.

perfectly healthy, menstruates regularly, and is free from all hereditary taint. The chance of success is much more uncertain when the tumour is old, bulky, and painful; when it arises without any evident cause; when it appears at or before the critical period; and when it is attended with marked derangement of the uterine functions. The case is hopeless when the tumour involves the whole or the greater portion of the breast; when it is flattened and of stony hardness; when it is ulcerated, or attended with retraction of the nipple, or enlargement of the lymphatic ganglions, or when it coexists with similar disease in other regions of the body; and, finally, when it occurs in a female who is forty, or upwards of forty years of age, who is descended from cancerous parents, and who has ceased to menstruate, or menstruates irregularly. Under such circumstances, Boyer concludes with Monro that extirpation should be undertaken only at the most urgent solicitation of the patient, to whom the danger of a relapse should always be carefully explained beforehand.

The views of Mons. Vidal* so nearly agree with those of Boyer that it would be superfluous to present them in detail in this place. A rapid abstract must, therefore, be sufficient.

A relapse after operation, says this writer, is the most frequent result; one, indeed, generally to be looked for, either at the original site of the malady or elsewhere. The circumstances which are most favourable to the success of operations, and which should, therefore, be regarded as indications for its performance, are, the youth of the patient, the regularity of the menstrual function, an external exciting cause, the absence of hereditary taint, the recent standing of the complaint, the small volume and mobility of the tumour, freedom from enlargement of the axillary ganglions, and the presence of but little cellulo-adipous matter in the breast. Ablation is contra-indicated when the tumour is old, voluminous, ulcerated, or spread over the whole breast; when it is complicated with engorgement of the lymphatic ganglions; and when it occurs at the approach of the critical period, or is attended with great irregularity of the menstrual function. Considered separately, however, these circumstances do not, in the opinion of Vidal, absolutely forbid the operation any more than when the mamma is flattened and of stony hardness, when the nipple is retracted, and when the patient is descended from cancerous parents; circumstances which, according to Boyer and his followers, preclude all hope of success. In short, he thinks that

* Traité de Pathologie Externe, t. iii. pp. 804–5. Troisième edition, Paris, 1851.

one or more of these symptoms may be present, and yet the operation have a favourable issue. When the tumour is adherent, whether to the integuments or muscles, the prognosis is very unfavourable, and should always seriously arrest the attention of the surgeon. No one ought to operate when the disease extends to the intercostal muscles and bones of the chest.

Bérard and Denonvilliers,* speaking of cases of cancer favourable for operation, express themselves almost precisely in the same language as Boyer and Vidal. The small size, circumscribed character, superficial situation, and perfect mobility of the tumour, together with its recent formation, and its development under the influence of some external and appreciable cause, the soundness of the cutaneous covering, and the absence of engorgement of the lymphatic ganglions, are so many indications for the employment of the knife; while the reverse of these circumstances are so many contra-indications. These writers consider the coexistence of several tumours, and those tumours which result from relapse, as particularly unpropitious to a successful issue.

There is, according to these writers, a class of cancers in which it is never prudent to employ the knife, although they appear to be exempt from most of the complications which render the issue of the operation doubtful. These are scirrhous cancers, very chronic in their progress, occurring in old persons, causing hardly any pain or functional disturbance, producing no detrimental impression upon the constitution, and remaining indefinitely stationary, or, at all events, until some external injury, or indiscreet medication, revives their activity. An operation, under such circumstances, might no doubt succeed; but in depriving a patient of a malady which occasions so little inconvenience, the benefit which it confers would hardly compensate for the dangers attendant upon its execution.†

Mons. Velpeau‡ considers the removal of scirrhus of the breast proper only when the disease is entirely circumscribed in its character; or, in other words, when the malady is strictly confined to the gland, when there is no engorgement of the axillary ganglions, and when the internal organs are perfectly sound. "We may hope," says he, "for a complete success if the scirrhus be lobular, perfectly circumscribed, and easily enucleated. But we should expect such a result

* Compendium de Chirurgie Pratique, t. i. p. 696, Paris, 1840.

† *Op. cit.* t. i. p. 698.

‡ A Treatise on the Diseases of the Breast. Translated by Dr. Parkman. Pp. 61–62, Philadelphia, 1841.

with but little confidence in a case where the scirrhus is ramified, radiated, or of the simple or disseminated ligneous species." Under such circumstances, the operation might be performed with a view of prolonging life for a few months, or of ameliorating the patient's suffering; but beyond this no benefit would accrue from it. In speaking of encephaloid, Mons. Velpeau declares that, in extirpating it, we have only to fear its reproduction with renewed intensity.

J. B. F. Léveillé, of Paris, the author of a treatise on surgery in four volumes,* teaches that the prognosis in cancer, whatever may be its nature, is always extremely unfavourable; for, says he, on the one hand, there is no medical treatment that can resolve the disease; and, on the other, the success of our operations is so uncertain that many of the most reputable practitioners advise against their adoption on the ground that, in the true form of the malady, they are never of any permanent benefit. It is true, he continues, that the parts may heal; but they either reopen, or they become the seat of new tubercles after six months, a year, or several years; so that the affection is merely suspended, not annihilated. Notwithstanding this, Léveillé is in favour of extirpating scirrhous tumours, when they are a source of great and constant suffering, as a means of prolonging life. Speaking of the numerous patients operated on by Desault, and many of whom he carefully watched, this author declares that none survived at the time of the publication of his work in 1812. One only lived fourteen years, and died in 1806 with an enormous carcinoma in the other breast, complicated with enlargement of the mesenteric ganglions.

Richerand, the elegant author of the *Elements of Physiology*, and of a celebrated work on Surgery,† removed a large number of cancerous breasts with variable results, but, on the whole, so encouraging, that he may justly be ranked among the advocates for this operation. Two circumstances, according to this writer, contra-indicate this proceeding, namely, too great an extent of the local vice, and a general cancerous infection. If the breast is adherent to the ribs, immovable, and as it were glued to the anterior wall of the chest, it is not possible to determine the depth of its roots, and, consequently, it might be impracticable to effect the total ablation of the morbid substance, without which success could not, of course, follow the operation. Such a case, therefore, formally contra-indicates such kind of

* Nouvelle Doctrine Chirurgicale, t. iv. pp. 98–99, Paris, 1812.

† Nosographie et Thérapeutique Chirurgicales, t. iv. p. 381. Cinquième edition, Paris, 1821.

interference. Mere engorgement of one or more of the axillary ganglions on the affected side does not forbid the use of the knife; but the reverse is the case when the lymphatic invasion exists in the opposite axilla, inasmuch as it evinces a general cancerous infection, and the malady soon recurs, spreading with more violence and rapidity than if no operation had been performed. Nor does great adhesion of the tumour to the wall of the chest, according to Richerand, contra-indicate the use of the knife, inasmuch as experience has proved that the patient may be cured, even when we are obliged to remove the great pectoral muscle and scrape the ribs.

§ 5. VIEWS OF GERMAN, DUTCH, AND DANISH AUTHORS.

The views of the surgeons of these countries, upon the results of operations in malignant diseases, do not differ, so far as I have had an opportunity of making myself acquainted with them, in any essential manner, from those of the practitioners of other parts of Europe or of the United States. While some, especially those who flourished in the latter half of the last century, speak rather encouragingly of the use of the knife, others are so much dissatisfied with it that they have thrown all their influence into the opposite side of the scale, denouncing the remedy, except in a very few rare instances, as cruel, improper, and even unjustifiable. The startling and interesting observations adduced by David Van Gescher, of Holland, seem to have first aroused the attention of the physicians and surgeons of Northern Europe to the uncertain, if not futile, nature of excision as a curative agent in cancerous affections. In his *Treatise on Carcinoma*, published at Amsterdam in 1767,* he gives, from his own experience and that of others, numerous cases of this operation, in not one of which a radical or permanent cure was the result. It is worthy of remark, however, that most of these cases were examples of open cancer, or cancer in its more advanced stages, in which, as is well known, no mode of treatment that has hitherto been devised, answers any other purpose than that of a mere palliative. Similar views had been previously promulgated by Trieler, Van der Haar, Kaltschmidt, Damen, De Wind, and Uhorn; and since then the same kind of doctrine has been taught by Theden, Siebold, Kapp, Vogel, Rust, and nearly every modern author of Holland and Germany. In 1789, the Chirurgical Society of Am-

* Proeve over de Vornaamste Langduurige Gezwellen, Amst. 1767.

sterdam offered a prize of fifty ducats (a sum which was subsequently doubled) for a well-authenticated case of a complete and *unexceptionable* cure of carcinoma, either in its occult or ulcerated stage; but, strange to say, not a single candidate presented himself, such was the state of the science upon the subject at that period.

In 1772, Peter Bierchen* published a treatise at Stockholm, in which, after inveighing against cicuta and other remedies, he strongly insists on the utility of extirpation, especially when performed early in the disease. When there is ulceration of the tumour, or lymphatic invasion, he considers it as an evidence that the growth has taken too deep root, and that, consequently, an operation would only hasten the fatal result. P. Van Esch,† of Gand, in 1772, and J. C. Bauer,‡ of Hersfeld, in 1773, published each some successful cases of amputation of cancerous breasts. J. L. Schmucker,§ the celebrated Prussian surgeon, also about this period, wrote in favour of the use of the knife, and narrated several cases in illustration of its beneficial effects. It would appear that he had performed the operation a great many times, for he was a man of much reputation and extensive practice. Schmucker entertained some singular notions on the subject of carcinoma of the breast, and the removal of this gland by the knife. Thus, for example, he declares that the operation rarely, if ever, succeeded when there was inflammation of the edges of the eyelids. His experience, indeed, had taught him that the existence of this complaint was a sign of a contaminated state of the fluids, and, therefore, highly unfavourable to a radical cure. F. T. Oehme,‖ of Warsaw, and Deneke,¶ of Stralsund, both published, about the same time, the results of some successful cases.

The celebrated anatomist and surgeon, Peter Camper,** of Leyden, was an advocate for operative interference in mammary carcinoma. He advises that the knife should be resorted to at an early stage of the disease, before there is any involvement of the axillary ganglions, or serious disorder of the general health. He made it a rule never to operate, however favourable the other symptoms might be, when the patient complained of a fixed lancinating pain in the

* Introedes tal om Kraftskœder, Scrophulœse och Veneriskesor, och Swulnaderg, Stockholm, 1772.

† Heelkondige Vaarnemingen, Gand, 1772.

‡ Zwei Chirurg. Warnehm., Hersfeld, 1773.

§ Chirurgische Warnehmungen, th. ii. p. 51.

‖ Observ. einer Scirrheusen Frauenbrust mit öffnem Krebs, Warschau, 1774.

¶ C. C. Lerche, Diss. Observ. de Cancro Mammæ, Gœtting. 1777.

** Genees-Naturen Huishondkondig Kabinet, No. 3, p. 194, 1779.

chest, between the second and third ribs, which, of all the contra-indications, he considered as the most important. He avers that he was never deceived by this sign, and hence he never disregarded it in his practice.

A. T. Richter, the author of the celebrated *Anfangsgründe der Wundarzneykunst*,* expresses the opinion that extirpation of the mammary gland would succeed more frequently, if it were not regarded as a last resort, and if it were employed before trial is made of other remedies. It rarely, however, succeeds, even in occult cancer, and hardly ever in the ulcerated form of the affection. The best means of preventing relapse is to heal the wound by the first intention. Richter recommends the removal of the whole breast, and also all enlarged lymphatic ganglions.

C. L. Schmalz,† of Leipsig, asserts that the extirpation of an indolent scirrhous tumour of the breast is generally followed by the happiest results. The cure, on the other hand, is seldom permanent when the operation is postponed until the part is very painful, while a relapse may always be expected when ulceration has occurred. Gerret Jan Van Wy‡ insists upon the indispensable necessity of amputating cancerous breasts, and states that he himself, in one instance, happily performed the operation where the malady was attended with enlargement of the axillary ganglions.

Henry Callisen,§ of Copenhagen, the author of a celebrated work on surgery, published towards the latter part of the last century, thinks that early and prompt ablation is required, especially in cancer of the breast, on account of the multiplicity of lymphatic vessels, and the consequent danger of contamination of the neighbouring structures. At a more advanced period, and particularly when the malady has been developed without any obvious cause, after the age of forty, there is always repullulation, after operation, at the end of several years, if not sooner. He states that he saw hardly one woman survive of all those upon whom he had operated who were more than thirty years of age. From this remark, we may conclude that most of his cases were followed by a return of the complaint.

The brothers Wenzel, Joseph and Charles,‖ two eminent German anatomists, saw a great number of breasts amputated by Wiedmann,

* Vol. iv. p. 386.

† Seltene Chir. und Medicinische Vorfælle, Leipzig, 1784.

‡ Heelkondige Mengelstoffen, Amsterdam, 1784.

§ Princip. System Chir. Hodièrna, pars ii. p. 132.

‖ Arnemann's Magazin, b. ii. s. 3, p. 336.

and nearly all the patients remained cured. Several, in whom the wound had been long cicatrized, had a relapse, dependent, seemingly, upon some peculiarity of the skin and adipous tissue. In no instance, however, did the secondary tumour attain the volume of the primitive one; so that, although farther removal might be improper, the first operation generally subserved the purpose, if nothing more, of a palliative.

Dr. Lawrence Heister,* Professor of Physic and Surgery in the University of Helmstadt, is in favour of extirpation of the mammary gland, provided there is no disease of the integuments, or of the adjacent lymphatic ganglions. In that case, he remarks, the operation will not cure the patient; for the virus of the cancer which lies concealed in other parts will in a short time induce a recurrence of the disorder. Notwithstanding this, there are some instances, though they are rare, in which these bodies are indurated, and yet excision is followed by a complete cure.

The late Dr. C. B. Zang, Director of the Surgical Clinique of Berlin, and the author of a large work on *Operative Surgery*,† considers the following circumstances as contra-indicating excision of the breast: first, the existence of a cancerous dyscrasy, as evinced by the state of the skin, and the presence of fever, cough, pain behind the sternum, emaciation, and tendency to thoracic effusion; secondly, infection of the adjacent lymphatic ganglions, especially those of the axilla, although an instance occasionally occurs in which, when this is the case, the operation is successful; thirdly, firm and extensive adhesions of the tumour to the pectoral muscle; fourthly, the rapid development of the morbid growth, or its steady and persistent progress; fifthly, the coexistence of the malady in other organs; sixthly, its hereditary origin; and lastly, an open state of the sore. If, when these contra-indications are absent, an operation is decided upon, it should be performed as early as possible, before any precious time has been lost by vain attempts to cure the disease by internal remedies. Zang, however, looks upon extirpation merely as a palliative, no matter how early or how thoroughly it may be executed; because cancer, in his opinion, is always a constitutional, and not a local affection.

In the article on cancer of the mamma in Rust's *Handbuch der*

* A General System of Surgery, vol. ii. p. 61. English Translation, London, 1768.

† Darstellung Blutiger Heilkünstlerischer Operationen, dritter theil, p. 83, Vienna, 1818.

Chirurgie, published at Berlin, in 1830,* it is stated that extirpation of the affected organ is the only remedy that holds out any prospect of permanent cure, and that this, unfortunately, is but very rarely successful. The operation is recommended to be performed very early in the disease, before there is any constitutional contamination, or derangement of the catamenia. When the tumour has made great progress, is hereditary in its origin, or is attended with retraction of the nipple, adhesion of the skin, ulceration, enlargement of the axillary lymphatic ganglions, disease of a similar character in other parts of the body, as the uterus, or suppression of the menses, all hope of success from excision is at an end, and should, therefore, be refrained from, inasmuch as it can do the patient no good, and will only bring surgery into discredit. Rust himself,† one of the most eminent and experienced surgeons of his day, had no confidence in extirpation of cancerous breasts; on the contrary, he felt satisfied that it never could effect a permanent cure, and insisted upon it that, whenever such a result occurs, there is some mistake in the diagnosis of the case.

Professor Chelius,‡ of the University of Heidelberg, one of the latest and most respectable German writers on surgery, says that the only remedy for scirrhus of the breast is its removal by the knife, and the earlier this is done the more favourable may the result be expected to be. Where the disease is already somewhat advanced, and where the nipple is retracted, the general health disordered, and the menstrual function irregular, or entirely arrested, the result of the operation is doubly doubtful. Still, it is the only remedy to prevent ulceration. Where this process is already established, where there is hardening of other organs, and where the tumour is firmly attached to the surrounding parts, extirpation will be utterly useless; at all events, it can do nothing more in such a case than a palliative. Chelius has not noticed a more rapid progress after the operation, but, on the contrary, considerable relief for a long time.

Of ninety-eight amputations of the breast, performed for carcinomatous disease at the surgical clinique of the University of Breslau, by Professor Benedict,§ two ended fatally from exhaustion soon after the operation; and in all the rest, except thirteen, the malady returned after the wound was cicatrized, and destroyed life. With

* Vol. iii. p. 520.

† Handbuch der Chirurgie, b. iii. p. 438.

‡ System of Surgery, translated by South, iii. p. 539, Phila. 1847.

§ Rust's Magazine, No. 2, vol. xliv.; Amer. Journ. Med. Scien. vol. xvii p. 513, 1835.

regard to those that recovered, Dr. Benedict expresses his conviction that, in several at least, there was an error in the diagnosis, the gland being affected with scrofulous, or some innocent disorder.

Of the many operations performed for the removal of cancerous breasts by Professor Pockels, of Germany, a single one only had a favourable termination. The tumour, in this instance, was considered to be identical with that of reticular carcinoma, first described by Müller, of Berlin.*

§ 6. VIEWS OF ITALIAN AUTHORS.

But little is known, in the United States, of the surgical literature of Italy; few of our physicians are acquainted with the Italian language, and hardly any one visits that country in quest of professional information. The surgical sun of that once favoured and enlightened land, the home of poetry, philosophy, and the arts, has never risen since the death of the illustrious Scarpa, whose fame was coextensive with the European and American Continents. The principal surgical writers of Italy, during the last fifty years, are Monteggia, Palletta, Flajani, and, above all, the great surgeon whose name we have just mentioned. From these, therefore, we shall gather what information is necessary to the illustration of the present subject.

The views of Monteggia,† respecting extirpation of cancerous breasts, do not differ materially from those of the French writers, especially Lassus. He agrees with this author that the operation is improper when the malady is complicated with adhesions of the tumour to the circumjacent parts, enlargement of the axillary ganglions, severe cough, and difficulty of respiration. He enjoins it upon his readers that the knife should always be carried through the healthy tissues, and that the whole gland should be removed, however limited the heteromorphous deposit. He also lays much stress upon the importance of preserving a sufficiency of integuments to secure union by the first intention, or, at all events, the speediest possible closure of the wound. In speaking of carcinoma in general, Monteggia remarks that few patients escape relapse after the complaint has made some progress; for, in that event, the shock of the operation, superadded to the baneful impression which the cancerous poison

* Müller on the Nature of Cancer, by West, Part I. p. 84, London, 1840.

† Instituzioné Chirurgicale, vol. vii. p. 212, second edition, Milano, 1815. See, also, vol. ii. cap. xx.

has made upon the system, will almost certainly induce such a result, and that at an early period.

After extirpation of a carcinomatous breast, Monteggia* recommends the establishment of a large issue in the corresponding arm, with a view of maintaining a discharge of pus at least for several years, if not during the remainder of life. Desault, he says, who neglected this precaution, allowed the general health to take care of itself, and the consequence was that most of his patients soon experienced a relapse of the disease.

J. P. Palletta, who wrote on cancer of the mammary gland at an early period of his professional career, considers scirrhus, even in its incipiency, as a mere local manifestation of a constitutional disorder, particularly when it is not produced by any external cause. He was in favour of early operations, and thought it of no special advantage to save much integument; on the contrary, he was in the habit of removing the skin freely whenever he found it much attenuated or otherwise diseased; and he made it a rule, moreover, always to excise the entire organ. His advice is never to extirpate an old carcinomatous tumour, or one which is complicated with disease of the chest, or with a cancerous diathesis. His opinion, founded upon the result of personal experience, was that all operations of this kind are, in general, merely palliative measures.†

Scarpa‡ thought that extirpation of the cancerous tumour could be performed with a prospect of success only in the earlier stages of the malady, while there is yet an absence of sharp, lancinating pain, and the morbid deposit is still a mere germ, without any constitutional disorder. The chance of success is greatly diminished, if indeed not wholly destroyed, if the surgeon wait until the disease has made much progress, or until there is enlargement of the axillary ganglions, or a carcinomatous cachexy. His opinion on this subject seems to coincide nearly with that of Palletta. Scarpa believes that the surest way of preventing relapse consists in removing, along with the affected gland, a large portion of the neighbouring tissues, which, although apparently healthy, are not so in reality, but usually contain some cancerous matter, and thus serve as a nest for the reproduction of the malady. Thus, for example, if the tumour were not larger than a fist, he advises that at least twice that amount of

* *Op. cit.* vol. vii. p. 213.

† Weigel's Italiaenische Bibliothek, th. iii. st. 2, p. 199, Leipsig, 1797.

‡ Practical Observations on Cancerous Complaints, London, 1793.

substance should be removed, in order to place the parts in the best possible condition for a permanent cure. It would seem that this great surgeon, in the course of his long practice, met with only three cases of cancer where, after operation, there was no repullulation.*

Joseph Flajani,† a modern Italian surgeon, was a decided advocate for operative interference in all cases of cancerous breast, unattended with disease of the chest, violent pains in the arm, and enlargement of the axillary ganglions. His opinion was that, although the malady might occasionally be resolved, yet such a termination was so infrequent that it should not be considered as an objection to the use of the knife. Advising that the operation should be performed at as early a period as possible, he remarks that in twenty-seven cases in which this suggestion was adopted he met with only two where there was any recurrence of the morbid action. He considers it of no particular advantage to husband the integuments, or to favour union by the first intention. On the contrary, he seeks to promote suppuration and discharge by keeping the wound open, lest the matter should be confined, and thus produce mischief in the surrounding parts. His experience has taught him that relapses are more frequent after prompt than after tardy closure of the parts.

Although Flajani prefers to operate early in the disease, yet he does not consider the use of the knife as positively contra-indicated in the ulcerated form of the malady. Of several females who were subjected to this treatment, under these circumstances, four were cured, one died of consumption, and two retained their cancerous sores, but lived comfortably a long time. In every instance in which the disorder involved the entire gland, or which was attended with sharp lancinating pain in the chest and neighbouring parts, with fever, and enlargement of the axillary ganglions, or where the affection showed itself as a consequence of the suppression of the menses, or some other habitual evacuation, the operation infallibly hastened the death of the patient.

* Compendium de Chirurgie Pratique, par Bérard and Denonvilliers, t. i. p. 694, Paris, 1840.

† Collezione d'Ossero et Riflessione, t. i. p. 256; Sprengel, Hist. de la Medécine, t. viii. p. 486.

SECT. II.—CANCER OF THE EYE.

The most common forms of malignant disease of the ball of the eye, and the only ones that require any notice in this report, are encephaloid and melanosis. The variety of soft cancer, first described by Mr. Hey under the name of fungus hæmatodes, is by no means infrequent, but as it generally occurs in combination with the encephaloid deposit it does not seem to me to be entitled, in any way, to separate consideration. Most pathologists and morbid anatomists of the present day agree, if I mistake not, in regarding the two affections as mere subdivisions of one and the same growth. Of scirrhus, properly so termed, I have never seen an instance in this organ, and I doubt whether there is a well-authenticated case of it on record, notwithstanding what has been said about it in the books.

Melanosis and encephaloid, with their different varieties, are most common in young subjects, and they generally run their course with great rapidity, often terminating fatally in six or eight months, while very few live beyond a year or a year and a half. When extirpated, the disease invariably returns; or, if this remark be too sweeping, it reappears so generally and so constantly as to render all surgical interference absolutely worse than useless. I am certain that nothing could ever induce me again to undertake the extirpation of the globe of the eye in any case, either for encephaloid or melanosis. When I was a student in Philadelphia, I saw the late Professor McClellan remove this organ in three instances for these affections, and in each there was a reproduction of the malady in less than a month. The patients were children under nine years of age, and in two, the symptoms and progress of the malady were such as to hold out strong inducements for operation. I have extirpated the ball of the eye in eight cases, in six for encephaloid, and in two for melanosis, and in every one, so far as I have been able to judge, I believe that I have done mischief, by hurrying the patient prematurely to the grave. In one instance I performed not less than three operations almost in so many weeks, first removing the eyeball, and then portions of the lids and neighbouring parts, but all to no purpose. My patient died from the effects of the malady in a few months from the time of the first excision. Some years ago I saw a young gentleman, aged about thirteen, upon whom Professor Mussey, of Cincinnati, had already operated twice, with the effect of a

speedy relapse in each instance. When the case fell into my hands, some weeks after the last operation, the morbid growth had already made such rapid strides as utterly to preclude the propriety of farther interference. The youth went home, and died a few months after.

Anxious to ascertain the views of the surgeons of our ophthalmic institutions, I addressed, early in the progress of my labours, letters to a number of them upon the subject, but regret to say that two only have responded to my call, namely, Dr. Littell, of Philadelphia, and Dr. Bethune, of Boston. The former of these gentlemen, who has been so long connected with Wills Hospital, informs me that his experience respecting extirpation of the eyeball is actually less than that of many surgeons in private practice; for it would seem that the nature of the complaints, and the concurrent testimony of our ablest writers to the inutility of surgical interference have precluded him, in cases clearly malignant, from subjecting his patients to a procedure which gives so little promise of success, and which, in many instances, could hardly fail to accelerate the fatal event.

"My own observation," continues Dr. Littell, "abundantly confirms the unfavourable prognosis so unanimously given; every case of fungus hæmatodes of the orbit, and of medullary or encephaloid disease of the globe—maladies improperly confounded by many authors—which I have traced to its termination, having had intracranial origin or connection which utterly precluded all hope of permanent relief. In one instance, the morbid growth seemed to arise from the sphenoidal cells; in another, of fungus hæmatodes manifesting itself by an elastic swelling, simulating an encysted tumour, below the upper margin of the orbit, it was attached to the dura mater; and in a third, of medullary disease of the eyeball, there was extensive alteration of the optic nerves, and a large tubercle lying on the optic chiasm, though no indication was afforded of grave cerebral affection until comparatively a short time prior to dissolution."

Dr. Littell states explicitly that he never extirpates the eyeball in any case of malignant disease; nor, so far as he is aware, is the operation ever performed by any of his colleagues at Wills Hospital, with two of whom, Dr. Hays and Dr. Parrish, he has been associated since the opening of that institution in 1834.

Finally, Dr. Littell thinks that, in the treatment of medullary disease, attention to the general health, by placing the patient under the most favourable hygienic influences, with the alterative action of

some of the preparations of iodine, as the iodide of iron and the compound tincture of iodine, may have some effect in retarding the progress of the symptoms. In an instance recently under his care it appeared plainly beneficial. His experience, however, is too limited, it would seem, to enable him to speak confidently on the subject.

The subjoined cases of malignant disease of the eye and orbit have been communicated to me by Dr. George A. Bethune, surgeon of the Massachusetts Charitable Eye and Ear Infirmary.

Case I. *Colloid Tumour of the Orbit.*—The subject of this case, a blacksmith, aged thirty-five, had generally enjoyed good health. In 1832, he had an attack of inflammation of both eyes, which have remained weak ever since. Five years ago, he noticed a pterygium at the inner angle of the left organ, followed by impairment, and, finally, by complete failure, of the sight. For two or three months past he had occasional "twinges" in this eye, and an increasing "blur." When first seen by Dr. Bethune, in May, 1847, the globe was pushed outwards and forwards, and the pterygium, which was thick and vascular, extended partially over the cornea. A similar formation existed on the right eye. Connected with the base of the pterygium in the left organ was an elastic tumour, which filled the inner commissure of the lids, and which was more prominent below than above.

On the 14th of May, the tumour, which extended deeply into the orbit, and adhered closely to the bone, was removed along with the globe, as it was impossible to separate them in the dissection. The eye was perfectly healthy. The tumour, of the size of an English walnut, consisted of a soft gray substance, made up of large jelly-like granules, and was considered by Professor J. B. S. Jackson as a specimen of true colloid cancer. The parts gradually healed, and the man was discharged on the 30th of October, in good health. He was seen nearly two months after, without any appearance of relapse.

Case II. *Melanosis of the Globe.*—Mrs. G., forty-three years of age, has generally enjoyed good health till within the last six years, when she began to have pains at her catamenial periods. Three years ago, she was found to labour under a uterine polypus, which was removed. Twelve months previously, she was taken with pain and redness in the right eye, succeeded, by degrees, by total loss of vision. In June, 1847, the anterior half of the globe projected, in

the form of an irregular fungous mass, half an inch beyond the lids; the tumour was of cartilaginous hardness in front, and of a mixed white and red hue; behind, it was of a mixed black and red; and, still farther back, there was a shot-like tubercle, nearly black, with a livid tint. The remainder of the globe was much injected, but not enlarged, and a sanious discharge exuded from its surface. The eye was extirpated on the 18th of June, and in a month after, although the wound was not completely healed, the general health was good. In December, the disease returned in the orbit, and probably proved fatal soon after.

The eye was but little enlarged, except at the point already mentioned; it was everywhere solid, and, instead of its humours, there was a firm, dark, brownish mass, of an irregular figure. Posteriorly, there was a whitish substance, of a gristly consistence; the optic nerve was spotted black, and the sclerotic coat was much altered in its texture.

Case III. *Carcinoma of the Eye.*—A farmer, aged seventy-four, who had ordinarily enjoyed good health, observed a red spot on the sclerotic coat of the right eye, which gradually increased, and soon acquired the volume of a small pea; it commenced about two lines from the outer edge of the cornea, and was accompanied with unusual vascularity of the adjacent parts. The remainder of the ball was perfectly sound, and the sight was unimpaired. The operation, performed early in November, 1849, presented nothing extraordinary, and in a few weeks the man was discharged cured. When last heard from, in December, 1851, there was no return of the complaint. The tumour, examined microscopically, exhibited strongly, but not decisively, the usual indications of malignant disease.

Case IV. *Melanosis of the Eyeball.*—A farmer, sixty-eight years old, noticed, twenty years ago, a red spot on the outer corner of the left eye, which gradually expanded into a pterygium; this, after having long remained stationary, began to pain him, and to increase in size, ultimately obstructing the sight. On examining the organ, in February, 1850, a tumour, of a wedge-shape, black, smooth, and irregular, was found to project from its anterior surface, so as to separate the lids. Extirpation was performed on the 12th of the month, and the patient left the Infirmary on the 20th, the wound being only partly healed. On the 20th of June, when last seen, he was improving, without any indication of relapse. Under the

microscope, the tumour presented, first, numerous cells, apparently epithelial in their character; and, secondly, a great many cells of irregular outline, containing sub-cells and nuclei; also, some of a marked caudate figure, and an immense number of black granules, some isolated, and some aggregated into masses.

Case V. *Melanotic Tumour of the Ball and Orbit.*—A gardener, aged thirty-six, whose general health has usually been good, was attacked, sixteen months ago, after getting wet, with pain in the left eye, extending to the back of the head, and accompanied with redness and soreness. These symptoms have continued at intervals ever since, and have been followed, at first, with gradual, and finally with complete loss of sight. About six months ago the ball gave way, and began to enlarge until the present time; it is now disorganized, and forms a mass of the size of a small apple, which projects between the lids, and is encircled, in part, by a firm, irregular ring. The organ was extirpated on the 17th of September, 1850. There was some hemorrhage, but this was easily arrested by a tampon; a great deal of swelling and suppuration followed, and the man was not discharged until the 17th of October. When last seen, July 11, 1851, there was no appearance of a return of the malady.

The globe of the eye was altered in its form, but not enlarged, and was filled by a uniform black mass. The cornea was nearly effaced, the sclerotica was much changed, and the humours were destroyed. On the outside of the ball was a large mass similar to that within. The remainder of the growth, forming the larger part of the tumour, varied remarkably in colour, some portions being white, some gray, and others black or grayish-black. There was no appearance of encephaloid. The optic nerve could not be distinctly traced.

SECT. III.—CANCER OF THE GUMS AND JAWS.

The very singular growth, to which the term epulis is usually applied, is generally obscure in its character, and consequently difficult of diagnosis. Experience teaches that certain forms of this affection, which have not, however, been hitherto well described, are of a fibrous, or fibro-plastic structure, and, therefore, comparatively harmless, giving rise, perhaps, merely to some pain and functional disturbance. Occasionally, however, the growth is of a scirrhous nature, and sometimes, though very rarely, it is found to be en-

cephaloid. In either case, the progress and symptoms are such as usually attend these formations in other parts of the body.

The only remedy for scirrhous epulis is excision, performed at the earliest possible moment after its appearance. As the tumour generally springs from the socket of one of the teeth, ordinarily a grinder, mere ablation of the soft parts will not suffice; to be effectual, and unfortunately this rarely happens even under the most favourable circumstances, the corresponding portion of the bone must be removed at the same time, not only far away from the disease, but in its entire thickness. Partial excision is worse than useless. The following case, which seems to have been originally of a scirrhous character, and which may be considered as typical of this form of cancer, strikingly illustrates the hopeless character of the complaint, and the utter futility of excision as a curative measure.

Mr. S., a tall, slender man, aged thirty-two, of Allen County, Kentucky, consulted me in April 1851, respecting a tumour of the lower jaw, which he first observed three months previously. Commencing in a soreness of the gum round the last grinder of the right side, it was soon succeeded by a small red, tender swelling, which gradually increased until it was the size of the end of the thumb, when it was cut out by a physician in the country. In two weeks the tumour, now fully three times as large as before, was removed a second time, along with the last grinder, the root of which was much diseased.

When the patient reached Louisville, the tumour formed two large cylindrical masses, one on each side of the dental arch, of a pale red colour, devoid of pain, elastic, and of firm consistence, extending from the ramus of the jaw to the first bicuspid tooth. The cheek was round and unchanged in form; but just beneath the angle of the bone the parts were hard and swollen, in consequence of recent suppuration. On the 27th of April, I removed the morbid mass, along with all that portion of the jaw which lay between the bicuspid tooth and the ascending ramus. Slight erysipelas followed the operation, but the wound soon healed, and the patient went home in a fortnight.

Early in September, I learned that the gap left by the removal of the bone was occupied by a tolerably large mass, quite hard, and the seat of a constant discharge of pus. The tumour was steadily increasing, but was free from pain and soreness. On the 24th of the month, I operated upon him a second time, removing the whole of the new growth, which was now as large as a pullet's egg, and about

three-quarters of an inch of the anterior extremity of the ramus of the jaw, as this supported the diseased structure. The wound healed well, except at a small point, which remained fistulous for some months, owing to the difficulty of keeping its edges approximated in the first instance. On the 2d of July, 1852, the patient informed me that he was in good health, and that there was not the slightest appearance of disease of any kind.

Soon after receiving the above intelligence, however, the malady began to show itself again, in the form of a tumour at the anterior extremity of the ramus of the jaw, which soon acquired the volume of a pullet's egg, and became the seat of sharp stinging pains, darting about in different directions. It was very dense and firm, of a pale colour, and quite tender on pressure. The jaw in front of the tumour was sound, and the general health excellent.

On the 31st of August I excised the ramus at the articulation. The wound united by the first intention, and the man returned home in a fortnight, apparently in perfect health. The morbid growth, scarcely as large as a pullet's egg, and of a dense firm structure, partly fibro-cartilaginous, and partly osseous, was attached to the inner surface and anterior extremity of the bone, the latter of which was unnaturally thin and slightly notched. The external surface, neck, condyle, and coronoid process were all sound; but the inner surface, nearly as far back as the dental foramen, was somewhat roughened and thickened, from the effects of the disease.

Early during the past winter, this relentless disease returned just in front of the ear, forming a rapidly increasing tumour, which is at this time, April 2, 1853, nearly the volume of an ordinary fist. Of course, further interference is out of the question, though the general health remains pretty good.

When epulis presents itself in the encephaloid form, whether primarily or secondarily, no operation, however early resorted to, will be likely to result in anything but failure.

Scirrhus of the jaw bones must be exceedingly rare, as I have not, in a practice of twenty-five years, met with a solitary case. Many instances of the kind are, I am aware, reported in our surgical and periodical literature; but a careful examination of them fully proves that they were examples, not of hard cancer, but of encephaloid, or of fibrous, fibro-plastic, and fibro-cartilaginous growths. Melanosis is also very rare; perhaps still more so than scirrhus, while colloid is more frequently met with, especially in the lower

jaw, in what has been described under the vague names of osteo-sarcoma and spina-ventosa.

By far the most common disease of the upper jaw, of its body, as well as of its sinus, requiring operation, is encephaloid, which, in whatever form it may begin, or at whatever age it may seize its victim, always terminates fatally, whether it be permitted to pursue its own course, or whether an attempt be made to arrest it by excision. Here again we have to lament the want of reliable statistical tables, showing the results of surgical interference in a given number of cases of extirpation of the diseased structure. Of eleven cases operated on by Lizars, Syme, Robert, Scott, Earle, Guthrie, and Hetling, only one was completely successful. Was that one of a malignant character? The late Mr. Liston removed the upper jaw in seven instances, in only one of which the malady returned, and proved fatal. Dieffenbach relates five successful operations; Gensoul three, and one of failure; Rignoli had one successful case, and one case of failure.*

Who can doubt that the above cases, designated as successful, were of a malignant character? No intelligent, scientific, and experienced surgeon could, I am sure, come to such a conclusion. Hence, these cases lose much of their value in a practical point of view; because they cannot serve as a safe guide in future operations. One great misfortune in regard to nearly all morbid growths of the upper jaw is the difficulty of diagnosticating them; and so long as this difficulty exists will surgeons be likely to report as cases of cancer formations of the most simple and innocent description; the excision of which must necessarily be followed by the permanent cure of the patient.

Looking at my own cases of excision of the upper jaw, seven in number, I find that four have terminated fatally; two from a recurrence of the disease, one from pneumonia, and one from dysentery; that two have entirely recovered; and that one has suffered a relapse, but is still living, five years after the extirpation of the morbid growth. In this case, that of Mrs. Green, I excised nearly the whole of the upper jaw in 1847; and since then several pieces have been removed, at different intervals, on account of a recurrence of the complaint, by Dr. Sloan, of Indiana. Although the tumour, in this instance, was not inspected with the microscope, yet I am certain, from a careful examination of its physical properties, that it was

* Brit. and Foreign Medical Review, vol. vii. p. 250.

cephalomatous in its character; a circumstance which imparts more than ordinary interest to the case, inasmuch as it holds out encouragement to the surgeon in an affection usually regarded as desperate, if not hopeless.*

It is proper to state that in one of the above cases, marked as having recovered, the disease for which excision was performed was not malignant, while the tumour in the other possessed all the physical properties of encephaloid. I saw the subject of the latter case four years after the operation, when she was perfectly well.

The most common form of malignant disease of the lower jaw is encephaloid, which, judging from my own experience, is much more frequent in childhood and adolescence than at any other period of life. Indeed, the very worst cases that I have seen occurred before the tenth year, and ran their course with a rapidity truly frightful. Most persons thus affected die within six or eight months from the commencement of the attack; and if an attempt be made to relieve them by operation, the malady is almost sure to return in a very short time, either at the cicatrice, or in the adjacent structures, especially the lymphatic ganglions. The prognosis is here, if possible, still more unfavourable than in medullary disease of the upper jaw.†

SECT. IV.—CARCINOMA OF THE LIP.

Cancer of the inferior lip—for it is this organ that this disease nearly always implicates—may be of the true carcinomatous character, or it may be purely cancroid. The relative frequency of these two maladies has not yet been determined, though it is well ascertained that they are most commonly met with in old persons, and that they are much more frequent in the male than in the female. Practically, it would be interesting and important to know how to discriminate between cancerous and cancroid affections of the lip; but upon this subject our knowledge is too imperfect to enable us to arrive at any positive conclusions. All that can be said, with any degree of certainty, is that genuine carcinoma of the lip always returns after extirpation, whereas the epithelial form of the malady is not unfrequently curable by the knife, and sometimes also, but more rarely, by escharotics.

* Gross on Excision of the Upper Jaw, in Western Journ. Med. and Surg. vol. x. p. 207, third series, 1852.

† Western Journ. Med. and Surg. vol. x. p. 278, 1852.

I have been at some pains to illustrate this branch of the subject by a reference to cases; but after having ransacked all the periodicals at his command, Dr. D. D. Thomson, of this city, to whom it was confided, assures me that he has not been able to find more than three well-reported examples of extirpation of cancer of the lip upon record. The first of these cases is related by Mr. Cline, in the second volume of the *London Lancet*, for 1828–9. The patient, a blacksmith, between sixty and seventy years of age, had no return of his disease twelve years after the operation. The affected parts were hard and ulcerated, and the glands under the chin were enlarged to a great extent. The other cases are mentioned by Mr. Loyd, in the same periodical for 1850, but are deficient in their details. In one of the cases, the operation had been performed nine or ten years ago, and in the other thirteen years ago, without any relapse. Mr. Loyd, in the same communication, refers to two other cases of cancer of the lip operated upon long ago, without any untoward occurrence.

Dr. Benedict,* Professor of Surgery in the University of Breslau, mentions fifty-one cases in which the lip was removed at the surgical clinique of that city, and which were all successful, except one, where the patient was in a state of great weakness at the time of the operation. He regards the operation, however, merely as a palliative measure, as the disease invariably returns, either at the cicatrice or in some other part of the body. In a few cases, in which there was no relapse, he supposes that the disease was strictly local, or produced by some external cause, and not of a genuine cancerous character. He also asserts, contrary to the generally received opinion among modern surgeons, that the absence of tumefied ganglions under the jaw or in the neck does not justify a favourable prognosis; alleging that these bodies, or the lymphatic vessels communicating with them, usually become implicated at an early stage of the malady, and thereby predispose to a relapse in the event of a resort to the knife.

I subjoin the following facts, in further illustration of the subject: John Shipley, aged fifty, was admitted into the Louisville Marine Hospital, July 21, 1842, on account of a tumour of the lower lip, which made its appearance seventeen months before, in the form of a small wart. About eight weeks after it was first noticed he pulled it out, and applied lunar-caustic to the part; but it soon began to grow again, and, gradually increasing in size, at length became ulcer-

* Rust's Magazin, No. 2, vol. xliv; Amer. Journ. Med. Scien. vol. xvii. p. 513.

ated, and the seat of a severe burning and darting pain. At the time of his admission, the whole margin of the lip was indurated, and covered with a fungous growth, discharging a thin, sanious, and highly offensive fluid. On the 26th of July, Dr. Dodson, one of the surgeons of the hospital, assisted by Dr. T. L. Caldwell and myself, extirpated the affected structures by a free incision, embracing nearly the entire lip from one angle of the mouth to the other, and extending fully as low down as the commencement of the chin. Several vessels having been tied, the gap was filled with lint, and the wound soon healed by the granulating process. It should be stated that there was no disease of the gums or jaw, nor any enlargement of the neighbouring lymphatic ganglions. The tumour was of a firm scirrhous consistence; and the patient was very feeble and emaciated, at the time of the operation, from pain and loss of appetite and sleep.

I saw Shipley again in July, 1851, nine years after the above operation. His health had been perfectly re-established, and no tendency to relapse had ever manifested itself in the remnant of his lip, which was perfectly soft and pliant. As he was constantly obliged to wear a band around his mouth to confine the saliva, he had lost, from the pressure thus occasioned, the lower incisor and the right cuspid and bicuspid teeth; but the gums and jaw were entirely sound. The object of his visit to me was to get me to make him a new lip, which I accordingly did by the sliding process.

In 1846, I excised the central portion of the lower lip, embracing about one-half of the organ, from a gentleman of the name of Folsome, aged about forty, of Point Commerce, Indiana. The tumour was about the size of a pigeon's egg, hard and firm in its consistence, and the seat of a sharp, lancinating pain; it had begun in the form of a small chap or fissure, which had existed for many years, and had been a source of much annoyance. The general health had never suffered. This gentleman had no return of his disease in October, 1852, when I last saw him.

In the following case, the operation was performed by Dr. B. W. Dudley, of Lexington. The patient was the venerable and much respected Dr. Galt, recently of this city, now of its vicinity. The tumour appeared in 1820, and continued to increase for six years, when it was destroyed by powerful escharotics by the late Dr. Harrison, of Bardstown, Kentucky. The disease seemed to be completely eradicated, but some time after it returned, and continued to harass the patient until May, 1830, when it was excised by Dr. Dudley.

Since then the lip has remained perfectly well. Dr. Galt is now upwards of seventy years of age.

Professor Eve informs me that he has removed the whole of the inferior lip for what was supposed to be a cancerous affection in a man aged eighty, and that three years afterwards his mouth, cheek, and neck remained perfectly free from the disease. In a case of this affection, operated on by Professor Pope, of St. Louis, the parts retained their healthy condition; but cancer formed in the lung, and destroyed the patient.

The tables of Professor Hamilton, of Buffalo, contain five cases of cancer of the lower lip, all occurring in elderly subjects, and all followed by relapse, either immediately or at a period more or less remote from the operation. In one case, that of a man of forty, the disease began in the form of a wart, and was destroyed by the actual cautery; it returned, and after it had remained as an ulcer sixteen years the potential cautery was applied; it reappeared again in a month, and, spreading rapidly, was removed with the knife. The patient had remained well five years, when Dr. Hamilton reported the case.

In another case, the cancer was seated at the commissure of the lips. The patient was thirty-eight years of age, and the disease had made its appearance two years before in the form of a fissure. The parts were excised, and the gap was closed by anaplasty. Immediate relapse was the result.

There is reason to believe, as I have already stated, that genuine carcinoma of the lip nearly always, if not invariably, returns after ablation. "It is matter of common belief," says Mr. Walshe,* "that the lip is one of the situations in which the excision of cancer may be undertaken with the strongest hopes of success. There can be no question that the prevalent notion on this point is an exaggerated one, and has arisen in consequence of syphilitic sores having been cut away as cancers." Mr. Walshe has in some instances known the disease repullulate, after apparently the most thorough excision, in two or three months; and in a case which he observed in 1834, in the practice of Dupuytren, the progress and fatal issue of the affection were obviously hastened by the use of the knife. Velpeau says† it is important to operate freely and early in cancerous tumours of the lip; otherwise, they return in the neighbourhood

* On the Nature and Treatment of Cancer, p. 258, London, 1846.

† Operative Surgery, by Mott and Townsend, vol. iii. p. 345, New York, 1847.

and beneath the jaw with frightful rapidity. He relates the case of a robust peasant who died on the ninth day after the removal of a small cancerous excrescence from the lower lip, in whom, although his general health seemed to be good, hundreds of cerebriform granules were found in the liver.

The tables of Mons. Leroy D'Etiolles, of Paris, contain the results of 148 operations for cancer of the lip, of which 126 were performed upon males, and 22 upon females. Of the former, 114 were by excision, and 12 by caustic; the relapses were 15, that is, about one-eighth of the entire number. The 22 other operations were performed with the knife, and were followed by 7 relapses; that is, one-third of the entire number. Thus, it would seem that cancer of the lip is more liable to recur after operation in the female than in the male, in the proportion of upwards of one-half.* It is difficult, however, to say what reliance should be placed upon these tables, or whether they should be received at all as evidence in regard to the absolute and relative liability of cancer of the lip to return after extirpation. In France, to the inhabitants of which they refer, and where their accuracy can be best appreciated, very little confidence appears to be put in them by Mons. Leroy's professional brethren.

A good case of carcinoma of the lip, in which the gap, produced by the operation, was filled by cheiloplasty, and in which there was no return at the end of the third year, is related by Dr. Stout, of Easton, Pennsylvania, in the *Philadelphia Medical Examiner* for January, 1850. The disease had commenced about five years before in the form of a fissure, and gradually involved the whole of the lower lip, extending from one angle of the mouth to the other, nearly as far down as the base of the chin, and spreading over about one-half of the upper lip. The four inferior incisor teeth, together with the corresponding portion of the gum and jaw were removed with the tumour, which was very thick and hard, but not painful. There was no enlargement of the neighbouring lymphatic ganglions. The patient was fifty-three years of age at the time of the operation in November, 1844, and there was no evidence of relapse in April, 1848, when the case was published.

* Amer. Journ. Med. Scien. vol. viii. p. 244, 1844.

SECT. V.—CANCER OF THE PENIS.

The penis is occasionally the seat of malignant disease, chiefly in aged subjects; and the form in which it most commonly presents itself is the scirrhous. Encephaloid is extremely rare, both as a primary and secondary affection; and, as to melanosis and colloid, I am not aware that any cases of these morbid products have ever been noticed here. We have no statistics of malignant diseases of the penis, throwing any valuable light upon the results of operations undertaken for their relief. In my own practice, I have generally declined interference, for the reason, first, that most of the cases which have fallen under my observation were too far advanced to justify a resort to the knife; and, secondly, because I have never had any confidence whatever in the curative agency of excision in genuine cancer of this or any other part of the body. I have very lately performed the operation upon a gentleman, aged sixty-one, in whom the small size, the recent standing, and the circumscribed character of the tumour, as well as the total absence of lymphatic and constitutional invasion, augured most favourably, but who, nevertheless, was threatened with a return of the disease in less than five weeks. The extirpation in this case was most thorough, the knife being carried through the body of the organ far behind the gland, upon the upper and back part of which the morbid growth, hardly six lines in diameter, was situated.

Under proper treatment—consisting of a purely vegetable and milk diet, mild laxatives, and great attention to cleanliness—patients with scirrhus of the penis will, I presume, generally live quite as long and as comfortably without as with an operation. In several cases, with the history of which I am acquainted, life was not destroyed until more than three years after the appearance of ulceration of the tumour and enlargement of the lymphatic ganglions of the groin; a period seldom attained by individuals undergoing operation.

The tables of Professor Hamilton, annexed to this report, refer to three cases of cancer of the penis in which amputation was followed by relapse, respectively, at six, twelve, and twenty-four months. Dr. Warren's paper contains nothing definite upon the results of operation in the cases therein described. In one of the cases, remarkable for its hereditary character, the man died eight months after the amputation. This patient's father, grandfather, and great-grandfather, all died of cancer of the penis.

Professor Walshe* affirms that experience strongly exposes the inefficacy of excision in cancer of the penis. "When the disease," says he, "is actually established, removal of the morbid mass with the knife would appear to afford the only chance of saving the patient; and, unfortunately, this chance is a singularly sorry one. General experience corroborates the statement of Mr. Travers, that, 'if the penis be amputated at some distance beyond the hardened part, and before the disease has existed long, the patient *may* escape a return of it; but this is a *rare instance of good fortune.*'" * * "For my own part," continues Mr. Walshe, "I can find no recorded case of permanent recovery after amputation of the penis for unquestionable cancerous disease."

SECT. VI.—CANCER OF THE TESTICLE.

Scirrhus of the testicle is exceedingly infrequent. In fact, almost the only well-authenticated case of this form of carcinoma is that described by Sir Astley Cooper, in his *Lectures on Surgery*, by Mr. Tyrrell. The patient was forty-four years of age, and the organ was extirpated nine months after the first appearance of the disease. The wound healed kindly enough, but the thigh and leg, which were œdematous at the time of the operation, remained swollen, and the man died a month after his return home. Melanosis and colloid rarely attack the testicle, and I do not know of any cases in which the gland was removed for these affections.

The most common form in which malignant disease of the testis presents itself, is the encephaloid, fungoid, or cerebriform. The malady here, as elsewhere, is always fatal when left to itself. The only remedy is amputation, and this, unfortunately, is nearly constantly followed by relapse in a very short time. I have performed several operations for this form of carcinoma, without, I am satisfied, benefiting my patient in the slightest degree, except, perhaps, in so far as temporary relief from pain was concerned. The disease, in every instance, promptly returned, either at the original site or in some other part, and rapidly proved fatal. Mr. Curling states† that he has scarcely known a solitary example of castration having been performed for this affection in which the patient survived for any lengthened period. Of five cases recorded by Sir Astley Cooper, there was not one in which there was not a recurrence of the dis-

* On the Nature and Treatment of Cancer, pp. 411–12, London, 1846.

† A Practical Treatise on the Diseases of the Testis, p. 378, Philadelphia, 1843.

ease; and Sir Benjamin Brodie, in his large experience, never knew but one patient whose life was prolonged by the operation beyond a few years.

Dr. Otto Baring, of Hanover, in Europe, seems to entertain a more favourable opinion of excision in this affection than the majority of English writers. In his elaborate *Treatise on Medullary Fungus of the Testicle*, published in 1833, and comprising the most complete body of facts that has yet been furnished on the subject, he gives the particulars of several cases in which the operation was performed, with the most gratifying results, by Rust, of Berlin, Langenbeck, of Göttingen, and Hagedorn, of Stade. In two of these cases, a period of five years, in another, of three years, and in a fourth, of two years, had elapsed since the removal of the organ, and yet there was not the slightest appearance of relapse, or of constitutional derangement. Dr. Baring considers castration proper in all cases where the disease is of local origin, or the result of external violence, and where the system remains free from contamination. Even in enlargement of the ganglions of the groin, he thinks an operation not wholly inadmissible; whereas, such a step is altogether unwarrantable when the disorder has extended to the spermatic cord, or affected the constitution.

Professor Pope, of St. Louis, has excised the testicle in four cases for encephaloid. "The only one," says he, "that I know of now, has the other gland affected like the first."

An instance in which the patient, aged thirty-five, has remained well for at least twelve years after the extirpation of an encephaloid testicle, came under the observation of Dr. J. B. Flint, of this city, in 1840, and is recorded in a former volume of the *Transactions* of this Association. Although the wound healed kindly, yet the man continued weakly for many months, but finally recovered under the use of tonics, and was well when the case was reported in April, 1850.

In the table of Dr. Forsyth, accompanying this report, and drawn up at my request, twenty-two out of the twenty-seven cases are stated to have been fatal; of the rest, in one, the disease returned; in one, the result is not given; in another, the patient remained well five months after the operation; in a fourth, the man was enjoying good health at the end of two years; and of the other, no report was made after the first month. Three of the cases are marked as scirrhus, and of these one recovered, that is, he was alive at the end of a month. All the other cases were encephaloid.

Table of Twenty-seven Cases of Malignant Disease of the

No.	Age.	Residence.	Cause.	Duration.	Progress.	Mode of operation.	Structure.	Result.	Size.	Surgeon.
1		Worcester.				Castration.	Encephaloid	Death		A. Cooper.
2	46	Ramsbury.		4 mo's	Rapid	"	"	"	3 times as large as natural.	Dr. Blackman.
3	40	London.				"	"	"		A. Cooper.
4	48	Rotherham.					"	"		Mr. Lunn.
5	44	Pottenham.		8 mo's	"	"	Scirrhous	"		A. Cooper.
6	25	Cambridge.				"	Encephaloid	"		Okes.
7	5	London.				"	"	Return		Cline.
8	1					"	"	Death		Earle.
9	1			2 mo's	"	"	"	"	Hen's egg.	Langstaff.
10						"	"	"		Cline.
11	27					"	"	"		Cruveilhier.
12	34			10 mo's	"	"	"	Not given	8 times the size of the other testicle	Curling.
13				1 year	"	"		Death		Hunter.
14	28	Edinburgh.		9 mo's	"	"	"	"	Goose egg.	Newbigging
15	18				"	"	"	"		Dr. Thompson.

Testicle. By Alexander Forsyth, M. D., of Louisville.

Authority.	*Post-mortem* examination.	Remarks.
Cooper on Testis, p. 156.	A tumour behind the duodenum, and one in the loins, of a white, fibrous, and brain-like substance, as large as the head of a child; mesenteric glands enlarged; aorta nearly closed by a fungous secretion.	
Cooper on Testis, p. 159.		A few months after the operation, the patient died with legs and thighs swelled, a large tumour in the abdomen, &c.
Cooper on Testis, p. 160.	A large tumour, of a pale white colour, curd-like matter, and of the consistence of cream, filled nearly the whole of the abdominal cavity; the liver contained two white tubercles; thoracic viscera healthy.	This patient died ten weeks after the operation.
Cooper on Testis, p. 162.	Abdominal viscera more or less affected with the same disease.	
Cooper on Testis, p. 169.	No *post mortem* reported.	The testicle in this case presented a hard, white, compact, tuberculated, and, in some parts, very vascular appearance.
Cooper on Testis, p. 179.	The abdominal cavity presented, in all directions, large irregular masses of a soft pulpy structure.	This patient died 13 months after the operation.
Curling on Testis, p. 368.		
Curling on Testis, p. 368.	Brain and other parts similarly diseased.	
Curling, p. 368.	The lumbar glands, lungs, and dura mater were affected with same disease.	
Curling, p. 372.	A large tumour in the loins, which had affected the vertebræ so as to press upon the spinal cord.	The patient died paralytic.
Curling, p. 372.	The sixth and seventh cervical vertebræ, and the posterior extremities of the first and second ribs, diseased in the same way.	This patient also died of paralysis.
Curling, p. 375.		The history of this case is not given complete.
Curling, p. 382.	A large tumour was found in the abdominal cavity, resembling coagulated milk with whey in it; the colon, stomach, and other viscera, were connected by a similar tumour; the liver was filled with small tumours of the same kind.	This was a case of carcinoma of the tunica vaginalis.
Wardrop on Fungus Hæmatodes, p. 134.	Spermatic cord indurated; a large tumour surrounded the aorta and vena cava, of a soft consistence and a dark-brown colour; the liver contained tubercles of a blackish colour; in the pelvis of the kidney, a quantity of purulent matter was found; the lungs were tuberculous.	
Wardrop, p. 139.	Spermatic cord sound; the lymphatic glands along the lumbar vertebræ very much enlarged; when cut into were found of white colour and soft consistence.	This patient died on the tenth day after the operation.

Table of Malignant Disease

No.	Age.	Residence.	Cause.	Duration.	Progress.	Mode of operation.	Structure.	Result.	Size.	Surgeon.
16	33	Edinburgh		8 mo's		Castration	Encephaloid	Death	Large as two fists.	Wardrop.
17	47	Massachusetts	Fall	30 y'rs	Very slow	"	"			J. C. Warren.
18	27	"	"	2 y'rs	Slow	"	"	"	Large.	J. C. Warren.
19	30			3 y'rs	"	"	"	"		J. C. Warren.
20	35	Louisville		2 y'rs	"	"	"	"	Turkey egg.	J. B. Flint.
21	54	England		9 mo's	Rapid	"	"	Recovery	Goose egg.	Lawrence.
22		"				"	"	Death		Lawrence.
23	1	"		2 mo's	"	"	"	"	Hen's egg.	Langstaff.
24	36	"		1 year	"	"	"	Recovery		Langstaff.
25	2½	"			"	"	"	Death	Goose egg.	Brown.
26	50	"		4 mo's	"		Scirrhous	"		Key.
27	45	"				"	"	Recovery		Key.

of Testicle—Continued.

Authority.	*Post-mortem* examination.	Remarks.
Wardrop, p. 140.	A chain of glands extended from the internal ring (very much enlarged) to a large diseased mass situated on the lumbar vertebræ; this mass was pulpy—some parts as soft as cream, others firmer than brain.	This testicle weighed two pounds; the whole gland converted into a pulpy mass, none of the natural structure remaining.
Warren on Tumours, p. 331.	No examination of the body. The authority thinks the abdominal organs were undoubtedly diseased, but attributes the death to internal erysipelatous inflammation.	This patient received the injury when 17 years old; the swelling continued occasionally until 4 months before the operation; then became permanent and very painful.
Warren on Tumours, p. 332.	The membranes of the brain covered with lymph; the ventricles contained water; the lungs inflamed, and contained many tubercles; abdominal viscera not diseased.	Seven years before the operation, this patient felt pain in the testicle; had swelling; occasionally after had pain and swelling; 2 years previous to operation swelling became permanent.
Warren on Tumours, p. 334.	The body greatly emaciated; the abdominal cavity contained water; a knot of scirrhous glands extended from the groin to the aorta, which was buried in a mass of enlarged and softened glands; the right lung tuberculous and indurated; left lung partially diseased in same way. Brain not examined.	
Alex. Forsyth.	A large brain-like tumour in the pelvic cavity; a chain of diseased glands reaching from the groin to the stomach; pyloric extremity of the stomach diseased in the same way; the brain and lungs not examined.	This case has never been reported; I am familiar with its history, and have the tumour in my possession.
Lancet, vol. ii. 1846–7, p. 444.		Five months after there was no return of the disease.
Lancet, vol. i. 1829–30, p. 828.	No examination. Thoracic viscera supposed to have been diseased.	This patient lived a year after the operation.
Lancet, vol. i. 1835–6, p. 405.	The absorbent glands in the lumbar region affected with same disease; left lung much diseased in same way; a large tumour on the internal portion of the parietal bone; other viscera healthy.	
Lancet, vol. i. 1835–6, p. 407.		The patient was in good health two years after the operation.
Lancet, vol. i. 1836–7, p. 639.	No examination.	This patient was paralyzed in the lower extremities before death; a large tumour could be felt in the abdomen.
Lancet, vol. ix. 1825–6, p. 138.		This is reported true scirrhus, although no operation had been performed when the case was diagnosed. (Diagnosis no doubt incorrect.)
Lancet, vol. i. 1826–7, p. 14.		This patient (according to Mr. Key) left the hospital in one month, quite well. No report after that.

SECT. VII.—CANCER OF THE UTERUS.

Perhaps the most common form of carcinoma of the uterus is the scirrhous, and next in point of frequency the encephaloid. What has been called the cauliflower excrescence, by Sir Charles Clark and others, is probably a mere variety of the latter affection, and is, beyond question, of rare occurrence. As to melanosis and colloid, they have never, so far as my information extends, been the subjects of operation in the uterus.

Excision of the uterus for carcinomatous disease has been very seldom performed by American and English surgeons. In Germany and France, on the contrary, it has been resorted to not unfrequently, but with a result so discouraging that it has, of late years, been almost entirely proscribed by conscientious practitioners. The operation is said to have been first performed by Professor Osiander, of Göttingen, who has published nine cases of its successful employment. Dupuytren, also, occasionally executed it, and, it is said, with almost invariable success. But its great advocate, unquestionably, was Mons. Lisfranc, of Paris, whom Dr. Balbirnie, in his enthusiasm, has styled the *apostle* of excision. This surgeon, so celebrated in his day, stated, in 1828, in a paper communicated to the Royal Academy of Medicine, that he had performed this operation, up to that period, on thirty-six individuals, of whom thirty were then well, while three had died, and three were in progress of recovery. One female, operated on some years before, had since become pregnant, and had recently given birth to twins.*

Subsequently to this communication, Lisfranc apprised the profession that he had excised the neck of the uterus, or the entire organ, ninety-nine times; but in this statement he is contradicted by Mons. Pauly, who, after a careful examination of all the facts, declares that he could make out only fifty-three cases. Of the results of these fifty-three cases we have, unfortunately, authentic information of only nineteen. Of these, only one was permanently benefited; four died within twenty-four hours after the operation; twelve had an immediate relapse; and in two others, in which the disease was imperfectly removed, death happened only the more rapidly, on account of the interference of the surgeon.†

* Practical Formulary of the Parisian Hospitals, by F. S. Ratier, M. D. p. 17.

† Churchill on the Diseases of Females, p. 191, Phila. 1843.

The operation of excision of the neck, or of the neck and body of the uterus, is not only generally useless, as it respects a permanent cure, or even considerable temporary benefit; but it is extremely liable to be followed by immediately fatal consequences, and ought, therefore, on this account, to be abandoned as a common proceeding. The greatest danger to which it leads is prostration, which is often so severe as to lead to speedy dissolution. Very few survive this shock when the entire organ is removed. Another danger is hemorrhage. Out of nine patients operated on by Lisfranc, under the observation of Pauly, six suffered from this cause, and of this number three died within twenty-four hours. Sometimes death is occasioned by pelvic phlebitis, or by peritoneal inflammation. Finally, instances are mentioned where the difficulties were so great that, in attempting to excise the affected parts, the operator has opened the peritoneum and the urinary bladder. The former of these accidents happened to Lisfranc; the latter, to Sauter and Roux.

It was in consequence of the indifferent success following this operation, as a curative agent, and of the great danger attending its execution, that Dupuytren, Osiander, and other surgeons and obstetricians were induced to discontinue it. Even Lisfranc rarely resorted to it in the latter periods of his career.

A case, in which excision of the neck of this organ was performed, is mentioned by Professor Atlee, of Philadelphia, in the sixteenth volume of the *American Journal of the Medical Sciences*. The operation was performed on the 21st of December, 1846, and the woman, who was forty-six years of age, died on the 9th of May, 1847, within a few days after reaching her residence at Pittsburg. The parts were inspected for the last time on the 24th of April, when the wound was found to be perfectly smooth and sound. The general health had not been good during the winter, and the system was evidently in a cachectic condition. It is to be regretted that there was no examination of the body.

Professor Eve, of Georgia, on the 16th of April, 1850, performed the daring operation of removing the entire uterus, through the vagina, for encephaloid disease, in a negress, aged twenty-eight. The woman recovered from the immediate effects of the excision, but died at the end of three months and a week, from a return of the complaint. No *post-mortem* examination was made. An account of this operation, accompanied by two drawings of the morbid specimen, has been published by Professor Meigs, of Philadelphia, in the *American Journal of the Medical Sciences* for October, 1850.

The following paragraph, by Professor Meigs, in the paper just referred to, has a direct bearing upon the subject of this report: "M. Colombat de l'Isère informs us that the operation—extirpation of the uterus *in situ*—has been executed by Sauter, by Hoelscher, twice by Siebold, and thrice by Langenbeck; four times by Blundell; once by Bauner; once by Lizars; twice by Recamier; once by Dubled; twice by Roux, and once by M. Delpech; while this operation by Professor Eve adds one integer to the whole number, which amounts to twenty operations, *in all of which the result was contrary to the hopes of the surgeons.*"

The subjoined table, drawn up for this report by Dr. William H. Miller, of this city, gives the results of operations in twenty-one cases of cancer of this organ:—

Table of Twenty-one Cases, showing the Results of Excision of the Neck of the Uterus for Malignant Disease.

By WILLIAM H. MILLER, M. D., of Louisville.

No.	Married.	Single.	Children.	Age.	Temperament.	Residence.	Cause.	Duration.	Symptoms and progress.	Mode of operation.	Result.	Structure.	Surgeon.	Authority.	*Post-mortem* appearance.	Time last seen.
1	1			40	Unknown	England		2 y'rs	Slow; discharge purulent, bloody, and offensive.	Ligature	Partially successful	Cauliflower exerescence	Ashwell.	Ashwell on Diseases of Females, p. 313.		Died of a relapse 2 years afterwards.
2	1		5	33		Scotland		3 y'rs	Slow; discharge watery, bloody and offensive; constant hemorrhage.	Excision	Successful	Cancer	Simpson.	Ediuburgh Medical Journal, vol. lv. p. 104.		Shortly afterwards became pregnant.
3		1		25		Bologna			Great hardness and ulceration of the neck.	"	"	"	Francesco Rizzoli.	Ibid., p. 297.		
4		1		33		Brussels	Mental anxiety		Lancinating pain in the uterus; fetid excoriating discharge.	"		"	Lisfranc.	Medico-Chirurgical Review, vol. x. p. 160.		One month.
5	1		6	30		France	Hereditary	1 year	Lancinating pains; hemorrhage, nausea, &c.	"	"	"	"	Ibid.		Two months.
6		1		25		"	Following abortion	8 mo's	Lancinating pains; vegetations; cervix tumefied and indurated.	"	"	"	"	Ibid.		One month.
7		1		22		"		Over a year	Lancinating pains; tumefaction, induration, and leucorrhœa.	"	"	"	"	Ibid.		Four months.
8	1		1	35		"		5 mo's	Progress rapid; induration and ulceration of womb; lancinating pains.	"	"	"	"	Ibid.		One month.
9	1			42		"	Mental affliction	3½ y'rs	Slow; induration and ulceration; fetid discharge; acute pains.	"	"	"	"	Ibid.		Two months.
10	1	1		27		"		5 y'rs	Great pains; yellow skin; general health bad; irregular menstruation; ulceration and induration.	"	"	"	"	Ibid.		Six weeks.
11	1			50		Constance		6 mo's	Copious hemorrhages; acute pain; numerous hard exerescences on the neck; painful and fungous; sanious discharges.	"	"	"	Sauter.	Balbirnie on Diseases of the Womb, p. 328.		Died two months afterwards of indigestion.
12	1			50		England		9 mo's	Ulcerations; hemorrhages; neck of uterus of cartilaginous hardness.	"	"	"	Blundell.	Ibid.	Fungous degeneration of both ovaries; peritoneal redness; rectum and colon distended.	Died a year afterwards of a relapse.

Table of Excision of the Neck of the Uterus for Malignant Disease—Continued.

No.	Married.	Single.	Children.	Age.	Temperament.	Residence.	Cause.	Duration.	Symptoms and progress.	Mode of operation.	Result.	Structure.	Surgeon.	Authority.	*Post-mortem* appearance.	Time last seen.
13	1		3	50	Nervous	France		8 mo's	Constant pain following cessation of menses; ulceration of a foul fungous nature.	Excision	Successful	Cancer	Recamier.	Balbirnie on Diseases of the Womb. p. 333.		Six months.
14	1		8	42		"			Large tumour on the neck of the womb; callous, bleeding, soft, and granulated.	"	"	Cauliflower excrescence	Duges.	Heming's Translation of Madame Boivin, p. 297.		Died in three months.
15	1		1	30		"		4 mo's	Large tumour on the neck; bleeding and granulated.	"	"	"	"	Ibid. p. 299.		Return of disease a year afterwards.
16	1		3	36		"			Progress rapid; cervix voluminous, indurated, and of a deep red colour.	Caustic	"	"	"	Boivin and Duges, p. 260.		Died in a month of peritonitis.
17	1			34		"			Cauliflower excrescence, with a sero-sanguineous discharge.	Knife	"	"	"	Ibid. p. 300.		Living four years afterwards.
18	1		1	27		"		1 year	Great emaciation; fever; yellow skin; uterine discharge of a cancerous odour.	Excision	"	Cancer	Lisfranc.	Balbirnie on Organic Diseases of Womb.		Died in five months.
19	1		1	54		"			Has had cancerous symptoms for years; fungous growth on the neck, with profuse discharge.	"	"	"	Dupuytren.	Ibid.		No return of disease eight years afterwards.
20	1			50		England		8 mo's	Cachectic consistence; os uteri ulcerated, and of a stony hardness; hemorrhages.	"	"	"	Blundell.	London Med. Gaz. August, 1828.	Fundus of bladder cancerously diseased: death caused by constipation.	Died in one year.
21	1		6	60		France			Profuse fetid discharge; ulceration and induration of neck; cylindrical fungoid tumour attached to the womb.	Ligature	"	"	Recamier.	Medico-Chirurgical Review, 1826, p. 266.		Died one month afterwards.

SECT. VIII.—CANCER OF THE ANUS AND RECTUM.

The most common form of cancer of these outlets is the scirrhous; encephaloid is observed only occasionally; and in one or two instances they have been known to be the seat of colloid. Rokitanski* and Curling† allude to the occurrence of epithelial cancer of these parts; but of this I have never seen an instance, and the affection is unquestionably very rare.

Cancer of the anus and rectum does not differ, in respect to its curability by excision, from cancer in other regions of the body. In my own cases, I have invariably declined all interference of the sort, under the conviction, first, that it could not possibly result in any permanent benefit; and, secondly, even supposing that it would be followed by a prolongation of life, which, however, it rarely is, the advantage thus gained would be more than counterbalanced by the distress and inconvenience occasioned by the loss of the sphincter muscle. Lisfranc, of Paris, and Dieffenbach, of Berlin, have been, in modern times, the warmest advocates of excision of cancerous tumours of the anus and rectum. The former of these celebrated surgeons performed the operation repeatedly, but with what success cannot be determined, because no reliance is placed by any one in his statements. Dieffenbach‡ asserts that he had recourse to the knife in not less than thirty cases of this kind. In one, the disease reappeared within four weeks, and in some others in three months; but the larger proportion continued well many years afterwards. Who will believe that all these cases were cases of real cancer, or even epithelial formations? Certainly, no one who knows anything of these complaints. We must, therefore, conclude that Dieffenbach was mistaken in his diagnosis; or, what would be less agreeable, that he has wilfully published what is untrue.

SECT. IX.—CANCER OF THE BONES.

The bones, as is well known, are liable to malignant disease in various forms, especially the encephaloid and colloid. In what is

* Manual of Pathological Anatomy, translated for the Sydenham Society, vol. ii. p. 100.

† Observations on the Diseases of the Rectum, p. 116, Lond. 1851.

‡ Brit. and For. Med.-Chirurg. Review, Oct. 1850.

denominated *osteo-sarcoma*, the textures characteristic of these two deposits often exist, either alone, or in combination. The case which I am about to describe appears to me to have been essentially of a colloid nature, though upon this point we have no positive information. The case has become memorable in the annals of surgery, not so much on account of its pathological peculiarities, as by reason of the daring character of the operation performed for its relief.*

The patient, Horace Wheeler, aged twenty-seven, of Randolph, Vermont, had an osteo-sarcomatous tumour, larger than a hen's egg, and involving the metacarpal bones of the thumb and index finger, which Professor Mussey removed in 1817. In September, 1831, more than thirteen years afterwards, the arm was amputated at the shoulder-joint, the malady having seized upon the radius and the upper half of the humerus, where it formed a very large swelling. The patient had suffered excessive pain during the last few years, the shoulder-joint was very stiff, and the soft structures in the neighbourhood were much thickened and indurated. The wound healed readily, and the parts appeared sound; but, subsequently, several abscesses formed in the stump, and some months elapsed before the cure was completed. Five years afterwards, the disease returned in the scapula and clavicle; and, in September, 1837, Professor Mussey performed the daring feat of removing both these bones in their entire extent. The immense wound united by adhesion, and became consolidated without the formation of a teaspoonful of pus. In the summer of 1852, Professor Mussey heard from his patient, who sent him his compliments, informed him that he was perfectly well, and that he intended to visit Ohio this summer, when he hoped to pay him his respects.

The tumour, in the last operation, contained a quantity of thick glue-like substance, enveloped by a mass of cartilage, interspersed with small osseous deposits. A part of the clavicle and more than three-quarters of the body of the scapula, with its spine, acromion, and coracoid process, exhibited a coarse spongy texture, with exuberant bony vegetations. The appearances were similar on the humerus, and on the metacarpal bone of the thumb.

Mr. Stanley, of London, who has published the best work on the diseases of the bones in the English language, thinks that encepha-

* Amer. Journ. Med. Scien. vol. 21, p. 390, 1837; Transactions Amer. Med. Association, vol. iii. p. 331, 1850

loid of the osseous tissues is probably always at first local, and that it continues so until the solids and fluids become affected by the absorption of the morbid matter, when secondary tumours form in other parts of the body. "If, therefore," he remarks,* "the original encephaloid tumour is removed before the blood has become poisoned, the disease will not return; but, if the morbid matters have already entered the circulation, it will be reproduced." In consonance with these views, Mr. Stanley advises that the limb upon which the tumour is situated should be amputated as early as possible, due regard being had, of course, to the condition of the neighbouring structures and the system at large, for where these are involved all interference of the kind is improper. I imagine, not so much from personal experience as from a careful study of many of the recorded cases of malignant disease of the bones, that the morbid action will, in the generality of instances, return more or less promptly after removal of the affected structures, no matter how early and how effectually this may be done. If I mistake not, Mr. Stanley's own cases, those, for example, adduced under the name of osteoid tumours, which he singularly enough separates from encephaloid, strikingly confirm the truth of this position. That the disease here is as much an affection of the constitution as when it occurs in the soft parts, is shown by the fact that it is almost always attended with contamination of the adjacent lymphatic ganglions, and involvement of the internal organs.

GENERAL CONCLUSIONS.

From the facts and statements which have now been presented, embracing the opinions of many of the most intelligent, experienced, and distinguished practitioners in different ages and in different parts of the world, the following conclusions may be legitimately deduced:—

First. That cancerous affections, particularly those of the mammary gland, have always, with a few rare exceptions, been regarded by practitioners as incurable by the knife and escharotics. This opinion, commencing with Hippocrates, the father of medicine, has prevailed from the earliest records of the profession to the present moment. Nature never cures a disease of this kind; nor can this be effected by any medicine or internal remedies known to the profession.

* A Treatise on Diseases of the Bones, p. 151, Phila. ed. 1849.

Second. That excision, however early and thoroughly executed, is nearly always, in genuine cancer, followed by a relapse at a period varying from a few weeks to several months from the time of the operation.

Third. That nearly all practitioners, from the time of Hippocrates to the present day, have been and are still averse to any operation for the removal of cancerous tumours after the establishment of ulceration, rapid growth, firm adhesions, organic change in the skin, lymphatic invasion, the cancerous dyscrasy, or serious constitutional derangement; on the ground that, if had recourse to under these circumstances, the malady almost inevitably recurs in a very short time, and frequently destroys the patient more rapidly than when it is permitted to pursue its own course.

Fourth. That in all cases of *acute* carcinoma, or, in other words, in all cases of this disease attended with very rapid development and great bulk of the tumour, extirpation is improper and unjustifiable, inasmuch as it will only tend to expedite the fatal result, which, under such circumstances, always takes place in a very short time.

Fifth. That all operations performed for the removal of encephaloid cancer and its different varieties, are more certainly followed by rapid relapse than operations performed upon scirrhous or hard cancer.

Sixth. That in nearly all operations for cancerous diseases hitherto reported, the history has been imperfectly presented, being deficient in the details which are necessary to a complete and thorough understanding of the subject in each case. This remark is particularly true in reference to the diagnosis of the malady, the minute examination of the morbid structure, and the history of the case after the operation, as to the period of relapse, the time and nature of the patient's death, and the result of the *post-mortem* examination.

Seventh. That cancerous affections of the lip and skin, now usually described under the name of cancroid diseases, are less liable to relapse after extirpation than genuine cancerous maladies, or those which are characterized by the existence of the true cancer-cell and cancer-juice.

Eighth. That although practitioners have always been aware, from the earliest professional records, of the great liability of cancer to relapse after extirpation, a great majority of them have always been, and still are, in favour of operation in the early stage of the disease, especially in schirrus, before the tumour has made much

progress, or before there is any disease of the lymphatic ganglions, or evidence of the cancerous cachexy.

Ninth. That many cases of tumours, especially tumours of the breast and testicle, supposed to be cancerous, are in reality not cancerous, but of a benign character, and, consequently, readily curable by ablation, whether effected by the knife or by escharotics. It is to this circumstance that we must ascribe the astonishing success which is said to have attended the practice of Hill, of Scotland, Nooth, of England, and Flajani, of Italy.

Tenth. That all operators insist upon the most thorough excision possible; removing not merely the diseased mass, but also a portion of the surrounding and apparently healthy tissues, as well as all enlarged and indurated ganglions.

Eleventh. That the practice has always prevailed, and still obtains, to save, if possible, a sufficient amount of healthy integument to cover the wound, and to unite, if possible, the wound by the first intention; on the ground that these precautions will tend much to retard, if not to prevent, a recurrence of the disease.

Twelfth. That much stress is laid by writers upon a properly regulated diet, and attention to the bowels and secretions after operation, as means of retarding and preventing relapse.

Thirteenth. That there is no remedy, medicine, or method of treatment which has the power, so far as we are enabled to judge of its virtues, of preventing the reproduction of the morbid action after operation, no matter how early or how thoroughly it may be performed.

Fourteenth. That life has occasionally been prolonged, and even saved, by operation after relapse, as in some of the remarkable cases mentioned in a previous part of this report; but that, as a general rule, such a procedure is as incompetent to effect a permanent cure as a first extirpation.

The following points may be considered as of an unsettled character; at all events, opinion respecting them is much divided, and farther observation is necessary before they can be positively determined, either affirmatively or negatively.

First. Excision is of doubtful propriety in all cases in which the disease is of hereditary origin, or where it occurs in several members of the same family.

Second. It is doubtful whether an operation should be performed when the patient is very young and the disease is of rapid growth.

There is reason to believe that surgical interference, in such a case, will only expedite the fatal issue, which is generally inevitable.

Third. It is problematical whether an operation should be performed when the disease is attended by suppression of the menses, or by great irregularity of this discharge.

Fourth. Not a few surgeons regard a resort to the knife as of questionable efficacy when there is a quickened state of the pulse, occasioned by the local irritation.

Fifth. There appears to be no general agreement among surgeons as to whether extirpation is proper when there are two or more coexistent and accessible cancerous tumours.

Sixth. It is supposed, but the fact is not established, that excision of carcinomatous tumours only tends to hasten the patient's death.

Seventh. It is doubtful whether, as has been asserted by different surgeons, the prospect of a permanent cure is greater, all other things being equal, after an operation on an old cancer, than after an operation on a cancer of recent standing.

Eighth. It has been stated by writers of great respectability, among others by Dr. Macfarlane, of Glasgow, that, in robust women of sanguine temperament, the reappearance of cancerous disease, and its subsequent progress, are more rapid after operation than in nervous or lymphatic persons; an assumption demanding verification.

Ninth. It requires to be proved whether excision ought to be performed in the ulcerated stage of malignant disease, as a means of prolonging life and of procuring comparative relief from suffering.

In bringing my labours to a close, I feel conscious that I have added nothing whatever to our previous information of malignant diseases. Nor, in truth, could this have been reasonably expected. My sole aim has been to sum up our knowledge upon the subject; to construct, as it were, a mirror which should reflect the practice and opinions of our predecessors and contemporaries, and thus serve as a guide to future travellers in the same path. In a word, my object has been to show, not only what has been done, but what remains to be done. The facts which I have collected, if useful at all, are so rather in a negative than in a positive point of view. Our knowledge of the results of surgical operations in malignant affections is in a state of transition, which has much to hope from the future, but can gain little, if anything, from the past. What the microscope and animal chemistry, guided by the hand of modern science, may do for the subject, it would perhaps, be premature to predict; already they have

rendered the cause essential service, and it would certainly be unphilosophical to suppose that they are incapable of affording farther light.

Finally, in drawing up this report, I have rarely appealed to my own experience, believing that, even if it were fully exposed, it could add nothing of real value to the general stock of our knowledge upon a subject respecting which so much has been written by others. In point of number, indeed, my own cases could not be put in competition with the extensive scale of facts brought forward by some of the surgeons, the results of whose labours it has been my duty to bring before the Association. I have little, indeed, I might say, no confidence in any operation for malignant diseases, except the cancroid varieties; and I have for years past, as Professor of Surgery in the University of Louisville, deemed it my duty to discourage a resort to the knife in all cases of the kind, especially in scirrhus and encephaloid of the mammary glands, ample experience having satisfied me of the utter futility of such an expedient, however early and efficiently employed. In cutaneous cancer, on the other hand, my rule has always been to operate, provided the disorder has not advanced so far as to preclude the possibility of removing the whole of the morbid growth; and provided, also, that there is no evidence of constitutional infection. To this rule I shall rigidly adhere, unless my own experience, or the experience of others, shall show me the impropriety of it, when I shall most cheerfully abandon it.

Professor Palmer —
With the kind regards of the Author

ON THE

RESULTS OF SURGICAL OPERATIONS

IN

MALIGNANT DISEASES.

BY

S. D. GROSS, M. D.

PRESENTED TO THE AMERICAN MEDICAL ASSOCIATION,

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